

# The Immortal Life of Henrietta Lacks

Rebecca Skloot

**Curriculum Unit**

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# Introduction

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Rebecca Skloot's *The Immortal Life of Henrietta Lacks* is a remarkable work of nonfiction, a well-written combination of biography, autobiography, cultural history, and scientific writing. We learn about HeLa, the seemingly immortal cells that originated with cervical cancer many decades ago and resulted in a transformation of science, medicine, and genetics, along with many treatments we take for granted today, including the polio vaccine.

We also learn about Henrietta Lacks herself, a young black woman, mother, and wife, dead from a virulent form of cancer at age thirty-one. We can glimpse only traces of the woman herself through her photograph and through memories, dim with time, of those who knew her. We hear that she was someone who brought out the best in people, who loved her children, who enjoyed dancing and playing games, who kept plenty of food on hand for hungry people who stopped by, despite the family's poverty. She lived in the racially segregated Baltimore, Maryland, area in the 1940s, but there is little sense that white racism had much personal effect on Henrietta Lacks's life.

We also learn about her descendants, victims as she was of racism, limited educational opportunities, and endemic poverty. They were among the last to know that Henrietta's cells revolutionized medicine and led to enormous profits for some companies; it was almost impossible for her children and grandchildren to understand exactly what all of this meant. The book features Henrietta's daughter, Deborah (Dale) Lacks, and her longing to know a mother taken from her when she was still a toddler.

In the background, there is also the story of the author, Rebecca Skloot, a white woman who grew up in privileged circumstances, was a frivolous high school student, went on to university and graduate work, and is now a journalist with a specialty in science. As a teenager in a college class to make up for a missing biology credit, she learned about HeLa, a discovery that led to her relentless search for information to write this remarkable book.

As if all this were not enough, there is also a lot of cultural history here. We learn about small tobacco farms in Maryland, about the burgeoning steel industry with the arrival of World War II, about *de facto* and *de jure* segregation, about the founding of Johns Hopkins Hospital to provide care for those unable to pay, and about events such as the syphilis experiments at the Tuskegee Institute.

This is a superb book for high school students, especially those with an interest in social justice, medical and scientific research, and the human interest story beyond virtually every endeavor.



# Teacher Notes

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For most groups, it is best to approach *The Immortal Life of Henrietta Lacks* by having students read the entire book on their own before discussing it in class. They can then review sections to prepare for discussion of specific people, events, and issues. Because we receive information incrementally, as Rebecca Skloot did in completing her research, it is difficult to reach conclusions based on only partial readings.

The table of contents of this unit will give you a general sense of the order of presentation. Lessons 1 and 2 set the stage by providing background information. Students discuss topics such as medical advances, the founding of Johns Hopkins Hospital, medical experiments that exploited African Americans, and the reality of small tobacco farms.

Subsequent lessons deal with many aspects of the book, including key issues involved in reading nonfiction, people and events involved in the HeLa story, the book's structure, and its themes, both explicit and implied. The supplementary materials in this unit include evaluation tools, an annotated list of related readings, and the format for a simple lab report. Several lessons recommend field trips to a science lab to foster appreciation and understanding of a scientist's work.

Lessons emphasize the nature of nonfiction and ways it contrasts with fiction. The nonfiction writer is bound by the limits of reality: what people really did and did not do, what they said and did not say. While the book can be taught to most levels of high school students, the content does require a certain amount of maturity. Some students may be shocked by Day's extramarital affairs and the fact that he brought home and passed on sexually transmitted diseases. In portraying Henrietta's husband, as in depicting the other people in the book, Rebecca Skloot was limited by reality. If this were a novel, she could have made Day Lacks a hero; in fact, if this were a novel, she could have enabled Henrietta somehow to survive. This is not a novel, though, and the facts are what they are.

These lessons directly address standards regarding use of textual evidence, identification of themes, analysis of structure, understanding of both literal and figurative language, and use of multiple sources of information.

Answers to handouts will vary unless otherwise indicated. Students may need additional paper to complete some handouts.





## Lesson 1

# Medical Research and Disease Control

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### Objectives

- To understand the extent to which modern medicine has mastered disease control
- To research information helpful to an understanding of *The Immortal Life of Henrietta Lacks*

### Notes to the Teacher

When plague swept through medieval Europe and decimated populations, there was little anyone could do to care for those afflicted. Since then, medicine has come a long way, and diseases that once raged out of control have been practically eliminated. This did not happen by accident. Doctors and medical assistants have tirelessly studied diseases and their causes, as well as the effects of various attempts to cure or at least stem the progress of various illnesses. While students' great-grandparents may have lived in fear of polio, for example, today people in developed countries such as the United States are unlikely ever to encounter the disease.

The painstaking process of disease analysis is at the heart of much of Rebecca Skloot's book, and many of the ethical issues she raises have to do with medical research. In this lesson, students discuss some of the advances that have taken place in medicine in the past century, including the virtual elimination of polio, measles, and diphtheria in much of the world.

Students then research and report on background information relevant to the book. One topic is Johns Hopkins Hospital, its mission, and its role in the history of Baltimore and in contemporary medicine. A second one is the syphilis project conducted at the Tuskegee Institute, and a third is the sterilization project sometimes referred to as the "Mississippi appendectomies." The fourth is the development of treatments for cancer since the research of Pierre and Marie Curie.

Finally, students focus on the nature of the single cell. For this, your school's biology room would be a useful field trip destination so that students can use microscopes to observe actual cells.

## Procedure

1. Distribute **Handout 1**, and ask students to read the information. Conduct a discussion based on the following questions:
  - What inoculations are routinely given to babies, children, and adults today? (Children get shots to prevent measles, chickenpox, mumps, diphtheria, and tetanus; most doctors do not think smallpox inoculation is still necessary. Many people get vaccinations to lower the risk of contracting flu and pneumonia. Some people need booster tetanus shots.)
  - How could a disease that was epidemic in 1952, with more than 57,000 cases, become virtually nonexistent today? (Dr. Jonas Salk and Dr. Albert Sabin created vaccines that have almost eliminated the disease as a threat to health today in most countries, not just the United States.)
  - When doctors are trying to discover cures and treatments for a disease, what do they need? (Researchers need ample access to victims of the disease so that they can study the way the illness progresses and the effects of possible treatments. They also need equipment that facilitates the analysis of body tissues and physical responses.)
2. Distribute **Handout 2**. Divide the class into small groups, and assign each group one of the following topics: the Tuskegee Syphilis Study (formally titled the “Tuskegee Study of Untreated Syphilis in the Negro Male” but today better known by its shorter title), the “Mississippi appendectomies,” the Johns Hopkins Hospital, or the history of cancer awareness and treatments. Direct groups to gather information about their topics and organize it into a report to present to the class as a whole. Have the groups record the questions and responses to their reports.

### ***Suggested Responses***

1. The Tuskegee Syphilis Study took place at the Tuskegee Institute, which was founded by Booker T. Washington to help advance the social conditions of African Americans. The location is ironic in light of the racism at the very basis of the study, which began in 1932 and was slated as a six-month project. It lasted for forty years until it was terminated as ethically unjustified in 1972. When the study began, syphilis was prevalent, affecting more than one-third of adults in America. At first intended to lay a foundation for treating African Americans with syphilis, the study actually focused on detailing the progress of untreated syphilis. The project was run by the United States Public Health Service and used six hundred poor black men, about two-thirds of whom were infected with syphilis. The volunteers were never told that the study involved syphilis, and they were prevented from seeking treatment with penicillin, which by 1947 was an effective cure for the disease. This study is now considered

completely unethical, because it treated human beings like lab animals, deceived the men (who were told they were being treated for “bad blood”), and did almost nothing for science and medicine. It exemplifies some of the racial attitudes prevalent at the time, especially in the South.

2. The term *Mississippi appendectomies* refers to compulsory sterilization statutes that were enforced in at least thirty states, mostly between 1919 and 1963. The statutes were most actively enforced in some southern states and targeted people who were designated as mentally deficient or were seen as a threat to society. In practice, forced sterilization was disproportionately imposed on women, both black and white. The statutes were challenged in the legal system in 1927, but the Supreme Court ruled that laws requiring sterilization of people with mental impairments were not unconstitutional, thereby providing a basis for state laws allowing sterilizations in the name of eugenics.
3. Johns Hopkins (1795–1873) was born on his family’s tobacco plantation in Virginia but moved to Baltimore, Maryland, where he became a businessman and eventually a multimillionaire. During the Civil War, he was on the Union side; either in spite of or because of his plantation origins, he was an avid abolitionist. Hopkins was a philanthropist who never married. Before his death, he made a will founding a hospital, a university, and an orphanage for African American children. The hospital opened in 1889. Hopkins’s will established his intentions:

. . . the indigent sick of this city and its environs, without regard to sex, age, or color, who may require surgical or medical treatment, and who can be received into the Hospital without peril to other inmates, and the poor of this city and state, of all races, who are stricken down by any casualty, shall be received into the Hospital without charge, for such periods of time and under such regulations as you may prescribe.

Today Johns Hopkins is one of the preeminent hospitals and research institutions in the United States.

4. Cancer is nothing new; the ancient Greeks and Egyptians were aware of the existence of tumors. The Renaissance saw a burgeoning interest in human anatomy, and autopsies were being conducted by early in the seventeenth century. In the nineteenth century, the science of oncology (the study of cancers) was born, and the invention of advanced microscopes facilitated the analysis of human tissues. Doctors performed surgeries to remove cancerous growths. The groundbreaking work of Pierre and Marie Curie led to the use of radiation to shrink and destroy tumors. Since then, there have been numerous efforts to end cancer the way medicine has ended other diseases, but to no avail. Modern medicine has developed many ways of treating cancers and prolonging life, including surgery, hormone therapy, radiation, chemotherapy, and immunotherapy. The emphasis today is on early detection.

3. Explain that high-powered microscopes are essential tools of modern medicine and enable doctors to study the structure of cells. If possible, take students to a biology lab and give them time to look at slides of amoebae, paramecia, plant cells, blood cells, and other cells from the human body. Read aloud Rebecca Skloot's description of the structure of a cell in the prologue to *The Immortal Life of Henrietta Lacks*. Then ask students to describe the structure of a cell. (A cell is surrounded by a membrane and contains a fluid called cytoplasm, as well as a nucleus that includes all of the cell's genetic information. The nucleus regulates all of the activities that keep the cell alive and functioning.)
4. Ask students how cell structures are part of everyone's life today. (Cell tests can verify an infant's paternity; a test of blood cells reveals who can benefit from a blood donation; if a person has a wart removed, the physician will check its cell content to make sure that no cancers are involved.)
5. Distribute **Handout 3**, and use it to review the structure of a cell. Ask students to study the table, which lists the purpose of each structure listed in the diagram. Lead a discussion about the function of a cell. Emphasize that these parts work together to enable a cell to function, and the health of the cell can suffer if any of these functions is compromised. Inform students that cell research is an ongoing and complex process as scientists constantly learn more about the ways different cells in our bodies function—both normally and in the presence of diseases such as cancer.

## Some Medical Facts

**Directions:** Read the information, and be prepared for class discussion.

1. In 1916, a polio epidemic killed about six thousand people in the United States; at that time, about 25 percent of polio victims died. By 1946, the death rate was greatly reduced, but polio remained a very serious and crippling disease. In 1952, the epidemic in the United States reached its height with more than 57,000 cases. Today polio is virtually nonexistent in the United States and most other nations.
2. Influenza is a viral disease that can take many forms. In 1918–1919, more people worldwide died from a flu pandemic than from the violence of World War I. Most people today regard the flu, when they get it, as a nuisance rather than as a serious disease.
3. In 1920, 150,000 cases of diphtheria were reported in the United States, resulting in more than 13,000 deaths. Today outbreaks of diphtheria still occur, but rarely, and only a handful of cases have been reported in the United States since 2000.
4. In 1922, about 107,000 cases of whooping cough (pertussis) were reported in the United States, with more than 5,000 deaths. Although at one time pertussis was thought to have been virtually eradicated in the United States, the incidence has been increasing since the 1980s, with more than 48,000 cases reported in 2012—the largest number of U.S. cases since 1955.
5. Tuberculosis is a bacterial disease that was once one of the biggest killers worldwide. The bacteria can mutate, and there are still outbreaks of the disease that resist treatment, but outbreaks are rare in the United States.
6. Measles, chickenpox, and mumps were once considered normal childhood diseases; parents believed it was best for their children to get the illnesses so that they would develop immunity and not have to worry about them in the future. Now doctors recommend that all children be inoculated against these diseases, which have been virtually eradicated in the United States.
7. Since the early 1980s, AIDS has had pandemic status, particularly in areas where use of condoms is low and drug use involving shared needles is high. Today safe sex practices and monitoring of blood supplies have mitigated the danger of contracting the disease, and treatments have improved. However, there is no cure, and people cannot be inoculated to prevent the disease. Doctors worldwide continue research in the areas of prevention, treatments, and potential cures.
8. Syphilis is a sexually transmitted bacterial disease. It progresses through several increasingly serious stages. While it can easily be cured by antibiotics, damage that has already resulted from the disease cannot be reversed. A pregnant woman with syphilis is likely to pass the disease on to her child.

## Find the Facts

**Directions:** Research the topics, and for each record information as well as questions and responses that take place during classroom discussion.

Topic	Information	Questions and Responses
1. Tuskegee Syphilis Study		
2. "Mississippi appendectomies"		
3. Johns Hopkins Hospital		
4. Cancer awareness/ treatments		

## The Structures of Human Cells

**Directions:** Cells come in various sizes and shapes and are basic units of living things, both animal and plant. The most well-known part of every cell is the nucleus, but there are also other structures that serve as machinery and as storage facilities. The following diagram shows some of the basic structures of an animal (human) cell. Using the table that follows, read about the purpose(s) of these basic cell structures and prepare to discuss them.

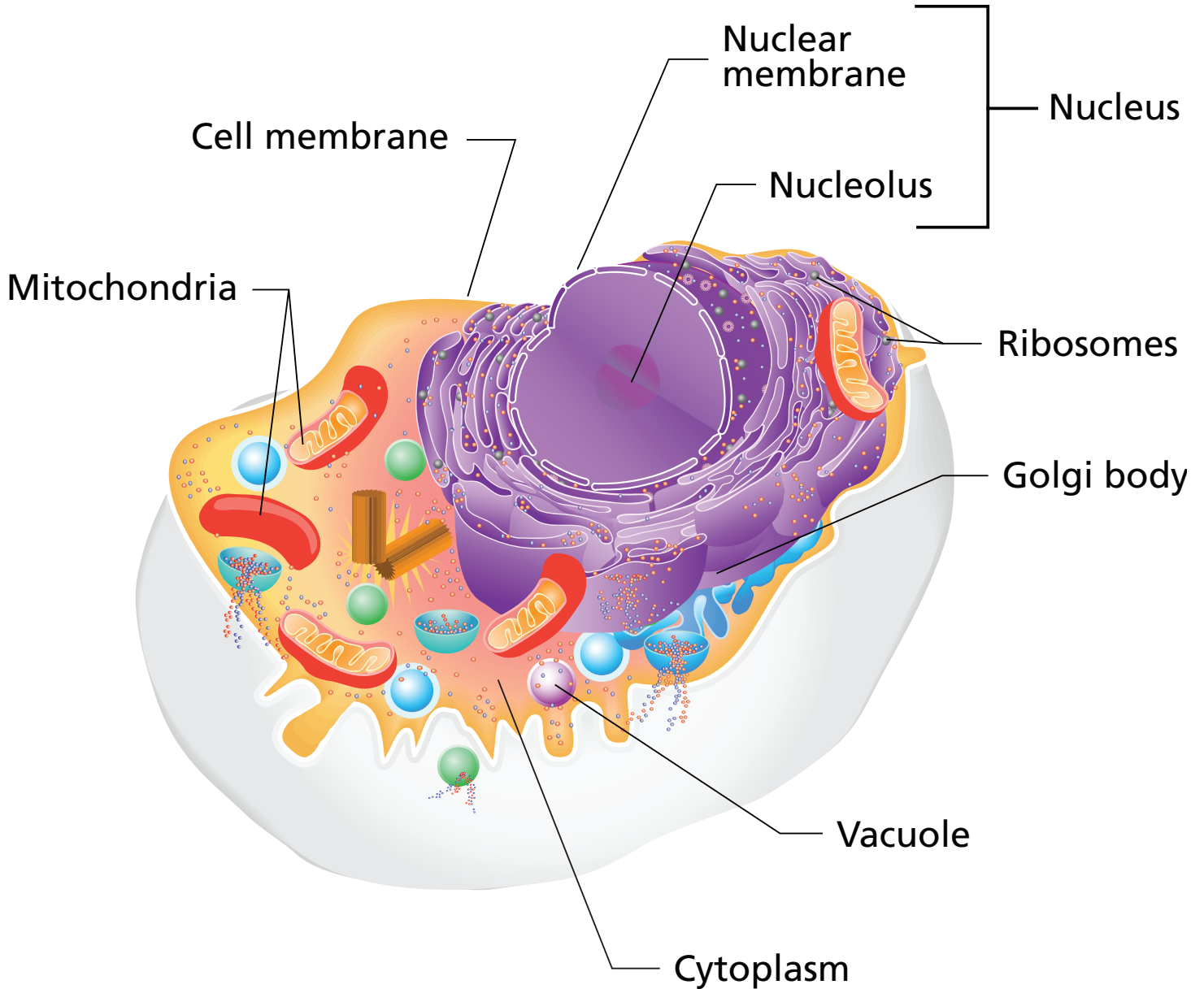


Image source: Structure of a Cell. By iStockphoto.com/snapgalleria

<b>Cell Structure</b>	<b>Purpose(s)</b>
Cell membrane	a biological membrane that separates the inside of a cell from the outside environment; protects the cell from its surroundings; controls the movement of substances in and out of cells; made up of a lipid bilayer with embedded proteins
Nucleus	a membrane-enclosed structure found in eukaryotic cells; contains most of a cell's genetic material and gene expression
Nuclear membrane	a double lipid bilayer membrane that surrounds the genetic material and nucleolus in eukaryotic cells; consists of an inner and outer membrane; allows material to move in and out of the nucleus
Nucleolus	the largest structure in the nucleus; rewrites ribosomal RNA (rRNA) and combines it with proteins; responds to cellular stress
Cytoplasm	a thick solution that fills each cell and is enclosed by the cell membrane; mainly composed of water, salts, and proteins; encompasses all material inside the cell that is outside of the nucleus
Mitochondrion	produces the energy currency of a cell (adenosine triphosphate) through respiration; regulates metabolism
Golgi body	collects and packages protein products into membrane-bound vesicles inside the cell before the vesicles are sent to their destination
Ribosome	builds proteins by receiving messenger RNA (mRNA) instructions and putting amino acids into the right order
Vacuole	storage and disposal unit; an enclosed compartment filled with water containing inorganic and organic molecules; isolates harmful materials or threats to the cell; transports waste and other unwanted substances from the cell



## Lesson 2

# Cultural Background

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### Objectives

- To understand the difficulties of growing and harvesting tobacco
- To learn about *de facto* and *de jure* legislation that maintained racial segregation after the Emancipation Proclamation
- To identify relationships connecting poverty, educational opportunities, sickness and its medical treatment, and crime

### Notes to the Teacher

The story of Henrietta Lacks reveals much about the cultural history of the United States, especially in the mid-Atlantic states during the 1930s and 1940s. For both small landowners and sharecroppers, the life of tobacco farming was an arduous one. Tobacco is not a crop that one can seed and then leave to grow on its own until harvest. The plants require constant attention, and tobacco has to be cured before it is marketed. Before the Civil War, this work was most often done by slaves, who made the privileged plantation culture of white society possible.

The burgeoning industrial development that came with World War II led to flourishing plants like the Bethlehem Steel installation at Sparrows Point in Maryland. In response to economic opportunity, many African American men migrated away from their farming roots, bringing their families with them and causing significant changes in lifestyle.

While in theory the Union victory in the Civil War should have meant that all persons actually were treated equally, this was not the case. In *Plessy v. Ferguson* (1896), the Supreme Court ruled that racial segregation was not unconstitutional and said that “separate but equal” accommodations were acceptable. In practice, facilities and services were separate but far from equal. In many places, segregation was *de jure*, mandated by law; in others, it was *de facto*, established by the facts of how people lived and worked. Today’s world is very different, and although African Americans and other ethnic groups face ongoing racism, the extreme limitations faced by Henrietta Lacks are likely to seem strange and almost impossible to students who, for the most part, have attended integrated schools and have seen an African American family in the White House.

As students read and discuss *The Immortal Life of Henrietta Lacks*, they will notice the ways that poverty affected the Lacks family and those in similar situations. Dropping out of school early to go to work in order to support the family was common; children forced to do so had to forgo their

education and therefore had limited future employment opportunities. Marginalized in white-dominated society, people like the Lacks family often left their illnesses untreated and suffered from poor nutrition; a deep suspicion of white institutions and individuals was the norm. During this time, for young men faced with the difficulties of finding jobs that could support them and their families crime sometimes became a way of life.

In this lesson, students gather information about tobacco farming in Virginia and consider the changes that urban life and industry would have brought to some families. In addition, students read and discuss information about *Plessy v. Ferguson* and the “separate but equal” policy.

### Procedure

1. Explain that this lesson will present additional information that will help the students understand and appreciate *The Immortal Life of Henrietta Lacks*. Lacks grew up on a small farm in Virginia where the whole family participated in the process of growing and harvesting tobacco.
2. Distribute **Handout 4**, and ask small groups to complete the exercise. (Note: Students who have finished the book will already have some answers from their reading. Additional information can be found on many websites.)

### ***Suggested Responses***

1. The colony of Virginia was founded in order to generate wealth for the mother country, England. Eventually this took the form of growing tobacco to satisfy market demand in England and elsewhere. The Virginia climate and soil proved ideal for this agriculture.
2. Tobacco has long been central to Virginia’s economy, and tobacco farming is the traditional occupation of many families, both wealthy and poor.
3. Originally, tobacco was farmed primarily on plantations, and the agricultural work was most often accomplished by slave labor.
4. Tobacco farming is labor-intensive and the quality of the harvest is critical to its monetary value. Farmers wage a constant battle against poor weather, insects, and other factors damaging to crops.
5. Most of the slaves in Virginia were not affected by the 1863 Emancipation Proclamation; however, the end of the Civil War in 1865 brought the end of slavery. Some large plantations were broken up for sharecropping. Others were divided into smaller units inherited by offspring, both white and biracial. Some tobacco plantations eventually became their own industrial sites.

6. Tobacco is still an important crop in Virginia and elsewhere, but its glory days are over. Today the government pays some farmers *not* to grow tobacco. Cigarettes and other tobacco products have become targets of the medical community because they have been shown to cause cancer. Tobacco farming may eventually become a historical phenomenon.
  7. World War II greatly increased the demand for steel, thereby increasing the need for steelworkers. The Bethlehem Steel facility offered more lucrative work for rural men engaged in subsistence farming.
  8. They would have had to make the transition from a rural, agriculture-based life to city life. Individuals moved far away from family roots and natural scenery into urban areas, where people lived close together. The relatively simple life of farming would have been replaced with the complexities of urban life, including higher rates of crime.
  9. The steel industry essentially collapsed, and Bethlehem Steel declared bankruptcy. The facility at Sparrows Point changed hands a number of times and eventually was sold to a company with plans to develop it as an industrial and transportation complex.
3. Distribute **Handout 5**, and ask small groups to complete the exercise.

### ***Suggested Responses***

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1. By law, a person with any black forebears, no matter how many or how few, was designated black, not white. For white plantation owners and workers in the South, it was not unusual to have a black mistress, which resulted in many mixed-race descendants. White gentility found it important to remain clearly separate, so all of these children and their descendants were deemed black.
  2. The consequences were everywhere, including in the U.S. military, hospitals, theaters, courtrooms, and churches. (Note: If students have read *To Kill a Mockingbird*, you may want to use Scout Finch's descriptions of Maycomb as examples.)
  3. "Separate but equal" is in practice not possible. As soon as a person is not allowed somewhere, that person has been deemed second class, not equal to those who are allowed there. For example, if a person is not allowed to use a water fountain, the implication is that the person is a health or hygienic risk to those who do use that fountain.
4. Point out that Henrietta Lacks died in 1951 in Baltimore, Maryland, before "separate but equal" was reversed. Except for her visits to Johns Hopkins, a charity hospital with separate facilities for black and white patients, she had little or no contact with white people.

## From Agriculture to Industry

**Directions:** Henrietta Lacks grew up in Virginia and as an adult lived with her family in Maryland. Use the Internet to gather some background information.

1. What was the main purpose of the Virginia colony when it was first established?
  
  
  
  
  
  
  
  
  
  
2. Historically, how important was tobacco farming in Virginia's economic development?
  
  
  
  
  
  
  
  
  
  
3. What labor force facilitated the operation of large Virginia tobacco farms?
  
  
  
  
  
  
  
  
  
  
4. How labor-intensive is tobacco farming?
  
  
  
  
  
  
  
  
  
  
5. How were the tobacco farms affected by the conclusion of the Civil War?

6. What is the state of tobacco farming in Virginia and elsewhere today?
7. The Bethlehem Steel plant at Sparrows Point in Maryland became one of the largest steel producers in the world. Why? How did its prosperity affect indigent farmers in outlying areas?
8. How do you think families were affected by migration from small farms to urban, industrial areas?
9. What is the status of the Sparrows Point facility today?

## ***Plessy v. Ferguson***

**Directions:** Read the information, and answer the questions.

The landmark U.S. Supreme Court case *Plessy v. Ferguson*, decided in 1896, had its roots in Louisiana in 1892. Homer Plessy, a thirty-year-old man of mixed-race descent who could easily pass as white, insisted on sitting in the whites-only section of a train; he did not claim to be white. A Louisiana statute of 1890 mandated racially segregated seating in trains. Plessy was acting as part of a deliberate effort to challenge the legality of this statute.

The legal challenge rose through the system all the way to the Supreme Court, which ruled that Louisiana's statute was constitutional. The court established a policy usually referred to as "separate but equal." Afterward, a policy that at first had applied to seating in trains was expanded in Jim Crow legislation to many other areas, including restaurants, rest rooms, and water fountains.

In 1954, the Supreme Court reversed *Plessy v. Ferguson* in *Brown v. Board of Education*. The justices found that "separate but equal" invariably became "separate and unequal" and was therefore unconstitutional. This important ruling did not immediately change the way people lived, and it was another decade before the civil rights movement, led by men like Martin Luther King, Jr., achieved an actual revolution in American culture.

### **Questions**

1. Homer Plessy's racial heritage was seven-eighths white. Why was he affected by the Louisiana statute?
  
  
  
  
  
  
  
  
  
  
2. After the *Plessy v. Ferguson* decision, what other areas of life do you think became separated by race?
  
  
  
  
  
  
  
  
  
  
3. Why is "separate but equal" an oxymoronic phrase?

## Lesson 3

# Reading Nonfiction

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### Objectives

- To recognize differences between fiction and nonfiction prose
- To analyze the credentials of the writer, Rebecca Skloot, as well as the purpose of her book

### Notes to the Teacher

The first sentence in the preface to *The Immortal Life of Henrietta Lacks* reads, “This is a work of nonfiction.” It is easy for students to miss the significance of that statement. Nonfiction prose is in several ways different from its fictional cousin. While the novelist can control events presented in the plot and can invent characters at will, the nonfiction writer is limited by the facts of reality. For many nonfiction writers, painstaking research is part of the process of producing a book or an article; diligent pursuit of interviews and study of others’ texts was clearly part of the process of producing *The Immortal Life of Henrietta Lacks*.

In this lesson, students first discuss the credentials of the book’s author, Rebecca Skloot, and the extent to which readers can view her as a reliable source of information. This issue of the writer’s credibility is key to effective reading of nonfiction. The fact is that anybody can say just about anything; whether we should believe that person depends on factors such as honesty and expertise.

Students then discuss the purposes of the book. We often distinguish among description, narration, exposition, and argumentation. In practice, most writings blend purposes. Here we get the story of a young African American woman who died in 1951 and a young white woman half a century later determined to write a book. We read descriptions of people and places, and we learn much about medical research, including the people and processes involved in it. We also learn about race relations and the effects of poverty in both Virginia and Maryland from the early twentieth century to the present.

To complete this lesson, students should be in the process of reading the book, but they do not have to have finished it.

### Procedure

1. Ask a student to read aloud the first sentence of the preface, “A Few Words about This Book.” Then ask what the sentence means. (Skloot did not create the content of the book out of her imagination, the way a

novelist does. She goes on to explain that she did not change any of the people's names, and she quotes them exactly the way they actually spoke. To rephrase would be to fictionalize.)

2. Point out that when we read a novel, we may find it interesting to learn about the author, but that knowledge is usually not essential to understanding and assessing the book. The situation is different with nonfiction. Provide examples. (A book about touring Venice, Italy, may not be very reliable if the author has never been there; an article about the health value of eating butter may not be unbiased if it was written by a member of the National Dairy Council; a news report about a highway accident may be erroneous if the writer was not on the scene and did not talk to witnesses.)
3. Distribute **Handout 6**, and ask small groups to complete it.

### ***Suggested Responses***

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1. As a teenager taking a biology course, Skloot first heard about HeLa and became fascinated with the story and the idea that a person's cells could survive and benefit science long after the person died.
  2. After what seems to have been a fairly haphazard high school experience, Skloot went to college and graduated with a degree in biology; she then pursued her master's degree in journalism. Both the major in biology and the specialization in journalism are key to the writing of *The Immortal Life of Henrietta Lacks*.
  3. Skloot makes clear that her background is very different from that of the Lacks family. Her white, privileged, and essentially nonreligious culture posed significant challenges in the research conducted to gather information for the book.
  4. Writing the book took years and involved extensive reading, traveling, and interviews with both members of the Lacks family and professionals involved in HeLa research. Skloot's persistence in the face of numerous obstacles adds to her credibility.
  5. Dr. Roland Pattillo of Morehouse College helped Skloot to contact the Lacks family, which led to her interviews with family members who remembered Henrietta and with Henrietta's descendants. Skloot also interviewed people and read others' writings about HeLa.
  6. Even those initially opposed to Skloot's project eventually came to like and trust her, a fact that adds to the confidence of the reading audience in the author's credibility.
4. Explain that authors usually target works at audiences. For example, someone writing about global warming could envision an audience of geologists, the general reading public, or children in elementary school. The intended audience shapes the writer's sentence structures, choices of images and figurative language, level of diction, and complexity of content.



5. Further explain that authors have purposes. Sometimes they just want to describe something or tell a story. At other times, the goal might be explanation or analysis, or the author might want to persuade the audience to accept a particular point of view. Clarify with the global warming example. One writer might write a descriptive piece about a melting glacier in Alaska; another might tell a story of a researcher in Antarctica; a third might present proof that global warming is a reality and explain its causes; a fourth might endeavor to convince readers to modify behaviors and vote for specific legislation designed to mitigate global warming.
6. Distribute **Handout 7**, and ask small groups to discuss the questions. Follow with whole-class discussion.

### ***Suggested Responses***

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1. The book includes short descriptive passages and more extensive narration of people's life stories; much of the text is exposition regarding medical and genetic research and HeLa in particular; Skloot avoids argumentation beyond the idea that the story of the woman behind HeLa is important.
  2. There are no elements of propaganda in the book. The text acknowledges that issues involved are complex and invites readers to make up their own minds.
  3. Skloot seems to have always emphasized the desire to tell the story of Henrietta Lacks; telling that story also involved writing about other people and about scientific research, so the book is more than just the story of the woman who was the origin of HeLa.
  4. Some people might argue that the book belongs with history or biography texts, but much of the content is scientific in nature.
  5. The style of the book is, for the most part, conversational and easy to read, and Skloot discusses science and medicine in terms understandable by ordinary literate people. She seems to have envisioned a popular audience of readers interested in science and in the human stories behind medical advances.
  6. Answers will vary widely and will help you to see which aspects of the book students found most engaging.
7. Tell students that the next lesson will focus on Henrietta Lacks and they should be ready to discuss the first twelve chapters of the book.

## The Issue of Author Reliability

**Directions:** Use the following questions to assess Rebecca Skloot’s credibility as the author of *The Immortal Life of Henrietta Lacks*.

1. How did Skloot become interested in the story behind HeLa?
2. What is Skloot’s educational background, and how does it connect with the content of the book?
3. What is Skloot’s cultural background? How does it relate to the subject matter?



## The Author's Purpose and Audience

**Directions:** Two key issues for perceptive readers of nonfiction are authors' purposes and their intended audiences. Use the following prompts as springboards to discussion.

1. Critics sometimes classify works in one of four general categories: description, narration, exposition, and argumentation. Which of these purposes are evident in *The Immortal Life of Henrietta Lacks*?
2. Propagandists use emotion to try to move audiences to specific opinions and actions. Does the book have propagandistic elements?
3. Rebecca Skloot described her purpose to people she interviewed in the process of writing the book. What purpose(s) did she articulate?

4. Most libraries shelve the book in the science section. Do you think that is where it belongs? Why or why not?

5. Some authors write for a highly specialized audience, while others speak to the general reading public. Whom do you think Skloot was addressing as she wrote this book?

6. Select one section of the book that you found particularly engaging, and analyze the intended audience and purpose of that excerpt.

## Lesson 4

# Henrietta Lacks

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### Objective

- To analyze the portrait of the woman behind HeLa

### Notes to the Teacher

The effort to discover who Henrietta Lacks really was decades after her death engaged Rebecca Skloot with people's memories and with medical records. We find out later that Deborah (Dale) has all her life longed to know her mother but was unable to get her father or relatives to talk about Henrietta. By the end of chapter 12, we have learned much of Henrietta's life story, including the dramatic events at her funeral.

What can we know of this ordinary woman with the extraordinary cancer cells that would revolutionize medicine and genetics? She grew up in rural Virginia and, because of her mother's death, was raised by her grandfather, the owner of a small tobacco farm near Clover. Her childhood was full of work on the farm and play with cousins, and they were all very poor but, it seems, not unhappy. She made it through the sixth grade before quitting school. A pretty girl, Henrietta attracted admirers, but it did not seem strange to anyone that she became pregnant by and later married her cousin David (Day) Lacks.

When Day got a job at Sparrows Point, the family moved to the Baltimore area, but Henrietta loved Clover and returned there whenever she could. She was generous with food and shelter, and she liked to dance and have fun. She used polish on her fingernails and toenails. She loved her five children, and she could be a forceful woman. Awareness of something strange inside her led her to Johns Hopkins Hospital and to diagnosis of and treatment for cervical cancer, which metastasized and led to her painful death at age thirty-one.

As you deal with the story of Henrietta's life, illness, and death, remember that few families today are untouched by the ravages of cancer. More than likely, students in your classes have had experiences involving treatments by radiation and chemotherapy and with death from various forms of this condition in which unregulated cell growth ravages the body. Some may find it difficult to discuss this illness and should be allowed their emotional space.

In this lesson, students determine what they know about the woman Henrietta Lacks. They compose and present paragraphs about her.

## Procedure

1. Distribute **Handout 8**, and ask students to complete it individually. Then conduct an open-ended discussion based on responses. Emphasize that everything we know about Henrietta Lacks's personality and interests is based on what people remembered about her decades after her death.

### *Suggested Responses*

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1. Clearly, Henrietta took care of her children and loved them; she was unhappy about the fact that the radiation treatments made her sterile.
  2. We cannot know exactly what she felt about Day; his amorous escapades continually exposed her to sexually transmitted diseases, but there is no evidence that she desired to leave him.
  3. Henrietta seems to have accepted and valued the life she led. She was not an early version of Bobbette, her daughter-in-law.
  4. This appears to be a true statement.
  5. It seems that Henrietta's life brought her few contacts with white people, and she did not grow up in the Baltimore area, which was rife with rumors about exploitation of blacks by whites.
  6. As long as Henrietta felt okay, she was likely to delay or refuse tests and treatments.
  7. Henrietta was a woman who loved to dance and enjoyed playing games with her cousins and her children. Church was part of her life but does not seem to have come up in stories about her.
  8. Henrietta was not nervous about leaving her sleeping children alone while she went out dancing. She seems to have made do with what they had, and that included feeding hungry men who ended up on her doorstep.
  9. Henrietta was not prone to using physical punishment to discipline her children, unless Lawrence swam in what she thought was polluted water. It seems that the children always behaved well when she was present.
  10. Most people like to think that their pain is not completely useless.
2. Distribute **Handout 9**. Divide the class into five groups, and assign each group one of the following topics: Henrietta's childhood; other people's attitudes toward her; her attitudes toward her children; what she liked to do; how she dealt with illness and impending death. Ask the groups to gather information, reach inferences, and prepare to report to the class as a whole.

### ***Suggested Responses***

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Note: Students can supply many more details from the text.

1. Henrietta's birth name was Loretta Pleasant; because of her mother's early death, she and her eight brothers and sisters were sent to live with relatives in Clover, Virginia, where their ancestors once worked as slaves. She was raised by her grandfather in a house that had once been slave quarters on a tobacco farm. She and her cousins spent their time doing farm chores and playing together. Among these cousins were men and women who later shared stories with Rebecca Skloot. Henrietta's first child, Lawrence, was born when she was only fourteen; her cousin David (Day) was the father and later became Henrietta's husband.
  2. We hear of several men, including Crazy Joe, who were seriously interested in Henrietta, and we hear of several women who displayed signs of jealousy. The workers' arrival at the hospital to donate blood shows their affection and respect for her. Ethel's cruelty to the children seems to have resulted from jealousy and resentment. To the doctors and other hospital personnel, Henrietta was just another nearly anonymous charity patient.
  3. The only child old enough to remember Henrietta was Lawrence, who was unwilling or unable to share his memories. After her death, Day was unwilling to say much about her. It is evident that she loved and took care of the children, and her dying words were concerned with their well-being. She spent a lot of time with little Elsie, who was beautiful but severely handicapped.
  4. There was no money for expensive pleasures, and life was filled with responsibilities. Henrietta enjoyed playing cards and games, and she and her cousin Sadie loved to go out dancing when Day was away working. A hospital record indicates that she did not enjoy sex, but she did like having and caring for babies. The detail of her polished fingernails and toenails comes up over and over again in the book. She was a woman who liked to look attractive.
  5. At first, Henrietta hid her illness, and then she tried to minimize its significance, perhaps in denial of its significance. She discovered her first tumor and sensed that there was disease inside her body. She was brave and uncomplaining during the early treatments, as she kept trying to live life as usual. Toward the end, as the tumors inside her proliferated, she was in severe pain and probably ready for the release of death. The story of the storm during her funeral has the effect of a powerful family legend.
3. Ask students to write paragraphs in which they present thumbnail sketches of Henrietta Lacks. Collect the writings as tickets out of class.



## Henrietta Lacks: First Impressions

**Directions:** Based on your reading of *The Immortal Life of Henrietta Lacks*, indicate whether you agree (A) or disagree (D) with the statement.

- \_\_\_\_\_ 1. Henrietta Lacks loved having and caring for children.
- \_\_\_\_\_ 2. She had a lifelong love relationship with David Lacks.
- \_\_\_\_\_ 3. She regretted not having an opportunity to go to college.
- \_\_\_\_\_ 4. Men usually liked Henrietta, but women tended to be jealous of her.
- \_\_\_\_\_ 5. She was deeply suspicious of white people and tried to avoid contact with them.
- \_\_\_\_\_ 6. She was always careful to take good care of her health.
- \_\_\_\_\_ 7. She was a serious and deeply prayerful woman.
- \_\_\_\_\_ 8. She worried constantly about the family's poverty and safety.
- \_\_\_\_\_ 9. She was very lenient with her children.
- \_\_\_\_\_ 10. She would have been glad that her cells could help other people.

## Henrietta Lacks's Life

**Directions:** Fill in the chart with facts and insights for each topic.

Topic	Facts	Insights
1. Childhood		
2. Others' attitudes		
3. Motherhood		
4. Enjoyment		
5. Illness and impending death		

## Lesson 5

# Dr. Gey's Research Work

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### Objectives

- To identify key persons in the development of HeLa
- To describe Dr. George Gey's research and motivation

### Notes to the Teacher

*The Immortal Life of Henrietta Lacks* is as much the story of advances in medicine and genetics as it is the story of Henrietta herself, and Dr. George Gey figures prominently in the story of HeLa. His brilliance is evident, along with his dedication to the pursuit of science and total lack of preoccupation with personal gain. In the years following World War II, scientists were eager to find or create “immortal” cells—especially immortal human cells—for research and experimentation. Human cells died soon after being removed from living human bodies, which meant that there were very few tissues available for study. HeLa changed all of that.

Dr. Gey's arrangements with Johns Hopkins Hospital may seem strange to students. He routinely obtained patients' tissues, both for cultures and to create materials conducive to culture growth. At the time, no laws governed this practice. As the book explains, later lawsuits led to the legal decision that once an organ or tissue is removed from a patient's body and left at the hospital or doctor's office, it becomes a kind of throwaway that no longer belongs to the patient. In fact, few of us would know what to do with an appendix or tonsils even if we did insist on keeping them.

In this lesson, students first consider what the book reveals about Dr. Gey, his wife Margaret, and their assistant Mary Kubicek. Students then discuss the development and initial use of HeLa. For this lesson, students need to have read through chapter 22, which tells of Dr. Gey's death.

You may find it worthwhile to have students complement this lesson with a biology experiment involving the use of microscopes. Your school's science department is likely to have an arsenal of basic resources, and you can also find simple ones described on the Internet (for example, the examination of skin cells).

## Procedure

1. Point out that while Henrietta Lacks was in a segregated wing of Johns Hopkins Hospital, not far away some people were working hard at scientific research. Point out that today some of the greatest hospitals in the country are also research facilities that have made enormous medical advances. For example, work at St. Jude Children’s Research Hospital has improved the survival rate of children with leukemia from only 4 percent in 1962 to 94 percent or better today.
2. Distribute **Handout 10**, and ask small groups to complete the exercise.

### *Suggested Responses*

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1. George Gey grew up in Pittsburgh, Pennsylvania, and worked his way through college and medical school. He was an impulsive genius, able to create functional items out of things others would see as useless junk. He was associated with the Johns Hopkins Hospital for most of his career. His wife Margaret, a nurse, worked with him.
2. Dr. Gey was trying to create a culture that would enable human cells to live and grow after being removed from a person’s body. This would be important to the study of both diseased and healthy human cells.
3. Other human cells weakened and died soon after being brought to the lab. Henrietta’s cells, on the other hand, were robust and grew at astonishing rates.
4. Dr. Gey did not attempt to make a financial profit from HeLa. He gave HeLa cells away to other researchers who needed human cells for their work.
5. Dr. Gey continued to pursue medical research and eventually died as a result of pancreatic cancer.
6. Margaret Gey was a nurse whose areas of expertise included keeping facilities contamination-free—something essential to the success of all medical labs. She also helped with the writing of Dr. Gey’s papers.
7. Mary Kubicek worked with tissues in Dr. Gey’s lab. Her job included preparing tissues to be placed in cultures. Nobody was more astonished than Mary when the new cells brought in from the hospital not only survived but also thrived.
8. The sight of Henrietta’s painted toenails made Mary suddenly aware that the cells she was growing came from a real woman who once had a real life.
9. It is probably easy for doctors and researchers to think of patients more as objects than as people. Mary saw, as readers of the book see, that HeLa was not just a scientific miracle. It came from a real human being who had experienced her own sorrows and delights.

3. If you wish, and if possible, take the class for a field trip to the biology lab and have them conduct an experiment involving the examination of human cells under microscope magnification. When they have finished, ask students to write brief lab reports including three sections: a description of processes used, a description of what they observed under the microscope, and three questions concerning the experiment.
4. Distribute **Handout 11**, and ask small groups to discuss the questions. Follow with whole-class discussion.

### ***Suggested Responses***

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1. Human cells include the components of all animal cells (see Lesson 1); the nucleus includes the genetic blueprint for a human being in the form of chromosomes.
2. Lab animals were and are useful, but they cannot replace human cells in the study of genetics. HeLa made it possible to experiment on human tissue without sacrificing the host creature, which would be unethical (to say the least).
3. New drugs and treatments require extensive testing before they can be approved. Scientists could inoculate HeLa with the polio vaccine and then introduce the polio virus to see if the cells were able to fight it off. Availability of a vast quantity of HeLa facilitated testing and made possible the relatively quick development of an effective polio vaccine.
4. HeLa was so robust that it could be sent by train, mail, and plane with basic precautions to ensure its endurance.
5. Scientists could study the cells intensively and eventually discovered that the normal human nucleus includes forty-six chromosomes and thousands of genes that are the blueprint for a person's physical makeup. This was the basis of the Human Genome Project, which was completed in 2003 when for the first time the entire human genome was sequenced and mapped, and scientists are still studying the implications of what we have learned.
6. HeLa was used to develop the polio vaccine and in the study of treatments for cancer, AIDS, radiation poisoning, and other disorders. Whenever scientists wanted to test the effects of something on the human body, HeLa was useful.

## Dr. Gey’s Research Lab

**Directions:** Answer the following questions.

1. What does *The Immortal Life of Henrietta Lacks* reveal about Dr. George Gey’s personal background?
2. What was Dr. Gey trying to accomplish in his lab at the time of Henrietta’s illness and death? Why?
3. How were the cells from Henrietta’s tumor unlike any that the lab previously received?
4. How did Dr. Gey profit from his luck in culturing HeLa?
5. What happened to Dr. Gey in subsequent years?

6. What do we learn about Margaret Gey? How important was her work?
7. Who was Mary Kubicek? What work did she do?
8. Chapter 12 includes an account of Mary Kubicek's presence at Henrietta's autopsy. How did she react?
9. Reread the quotation of Elie Wiesel that precedes the prologue, and relate it to Mary Kubicek's experience.

## The Importance of HeLa

**Directions:** Once Dr. Gey had Henrietta Lacks's cells in culture in his laboratory, they took on a life of their own and grew at a prodigious rate. In time, they were all over the world, and they were sent into outer space. Use the following questions to consider their importance.

1. What are the components of a human cell? How do human cells differ from other animal cells?
  
  
  
  
  
  
  
  
  
  
2. Before HeLa, what did scientists use for diagnostic tests? Why was HeLa preferable?
  
  
  
  
  
  
  
  
  
  
3. How did HeLa contribute to the creation of a successful polio vaccine?



4. How was HeLa transported across state and national boundaries? Why is that important?

5. How did HeLa contribute to our understanding of the human genome?

6. What are some ways that HeLa research improved life for people today?

## Lesson 6

# Henrietta's Children

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### Objectives

- To understand the effects of Henrietta's death on her family
- To recognize the five Lacks children as reflections of a specific place and time in American history

### Notes to the Teacher

When Henrietta Lacks died, Lawrence was a teenager, and Elsie had already been institutionalized; Sonny, Deborah, and Joe were small children. Much of *The Immortal Life of Henrietta Lacks* that does not focus directly on medical research describes what happened to these five casualties of the too-early death of their mother.

Students may have difficulty understanding Deborah, who in time became a real friend with Rebecca Skloot, despite enormous differences in their backgrounds. As she appears in the book, Deborah was intelligent, impulsive, loving, fearful, and outgoing but tormented by the loss of her mother and, later, by awareness of the loss of her sister. Some of Deborah's erratic behaviors resulted from spiking blood pressure and out-of-control diabetes.

In this lesson, students work in small groups to study the Lacks children and to try to understand their experiences. Students need to have completed their reading of the book.

### Procedure

1. Ask students to describe each of Henrietta's children when she died in 1951. (Lawrence was a teenager and relatively independent of the rest of the family. Elsie had been sent to a hospital for the insane and was unlikely ever to be able to communicate. Sonny was about four, Deborah less than two years old, and Joe still a baby. The three young children all contracted tuberculosis from visitors after their mother's death and had to be treated. All of the children had impaired hearing, whether or not they were aware of it at the time.)
2. Divide the class into five groups, and assign each group one of the children. Point out that the book's index can be helpful in locating specific textual references. Assign groups to summarize what happened to the children and how they were affected by events, as well as how they affected other people. When the groups have finished their work, have

them report to the class as a whole. (Note: **Handout 12** follows up on the content of this activity.)

3. Distribute **Handout 12**, and conduct a whole-class discussion based on the questions.

### ***Suggested Responses***

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1. Lawrence's growing-up years included both his father and his mother before her illness. At age sixteen, he was drafted into the army, which took him away from the rest of the family for two years, no doubt providing a variety of experiences.
2. When Skloot tried to contact the family regarding her proposed book about Henrietta, the Lacks family had already experienced shock over the discovery of HeLa, suspicions about white society's ruthless exploitation of African Americans, and the machinations of a con artist. Lawrence did not want Deborah to talk to a white journalist; in time, however, he came to accept Skloot.
3. Elsie was an extraordinarily beautiful child, but she was deaf and totally unable to communicate. Perhaps this was caused by the blow to her head when she was born; perhaps it was a result of syphilis. We cannot know for sure the cause of her limitations.
4. Whenever Henrietta was able, she went to visit Elsie at Crownsville, but her illness and death left Elsie stranded and alone. She, like other patients at the hospital, was probably used for painful medical experiments. The article that Deborah and Skloot read makes it clear that the hospital was woefully understaffed and mismanaged and had a very high mortality rate. Elsie died as a teenager.
5. From the first, Sonny was more evasive than antagonistic toward Skloot. The book describes his personal charm, and he was often Skloot's main contact when she was having trouble reaching Deborah.
6. It is not unusual for people in poverty-ridden and marginalized groups to turn to crime. When the establishment shows no interest in a person's well-being, that person is likely to feel disaffected and have diminished respect for the law.
7. Lawrence wanted to protect and in some ways control Deborah, as did Sonny, but she served as a kind of anchor for them. She exhibited no fear of Zakariyya and demonstrated an understanding that his anger needed release so that it would not destroy him. Her death devastated all three of them but seems ultimately to have led them to peace.
8. Skloot's sincere interest in the woman behind HeLa and her patience were binding factors. Both Deborah and Skloot came to see past their differences and achieved a genuine appreciation for and acceptance of each other.

9. Henrietta became ill when Joe (Zakariyya) was just a baby, so he missed a lot of mothering when he was an infant; then he was hospitalized with severe tuberculosis as a toddler. Ethel was particularly cruel to him, administering whippings and other ruthless punishments that the other children could do nothing to stop.
  10. The story of Henrietta Lacks became known through Skloot's writing, and Deborah's death impacted all three of her brothers. Despite the sense that Henrietta's family was not treated fairly, the men came to appreciate the benefits their mother's cells brought to many people. Zakariyya, though unpredictable and sometimes dangerous, at least became part of the family again.
4. Distribute **Handout 13**, and ask students to complete it individually. Follow with open-ended discussion.

### ***Suggested Responses***

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1. A ten-year life and health extension would have meant no tuberculosis, no torture by Ethel, and continued visits to (and therefore some kind of protection for) Elsie.
2. Without HeLa, Henrietta would remain a mostly unknown African American woman, and many medical advances would have been delayed or not made altogether.
3. Without Day's promiscuity, Henrietta would most likely not have been so vulnerable to cervical cancer.
4. Skloot might never have become fascinated by HeLa and therefore might not have written her book.
5. Kindness and responsible nurturing from Ethel and her husband would have meant an entirely different childhood for the three youngest children.
6. Without Dr. Pattillo's introduction, Skloot might not have gained access to the Lacks family.
7. Deborah would not have had her transformative visit with her cousin Gary, and Skloot would not have fully understood the spiritual lens through which the Lacks family viewed Henrietta's immortal cells.
8. Kindnesses extended by Christoph Lengauer and other people were part of the healing process the Lacks family badly needed. The aloofness of the hospital administration had exacerbated their emotional suffering.
9. Although Dr. Gey and Johns Hopkins did not make money from HeLa, the Lacks family might have shared in the significant profits that many other institutions and companies in the medical industry made by using Henrietta's cells.
10. The National Foundation for Cancer Research conference in honor of Henrietta would not have been canceled in the aftermath of the September 11 terrorist attacks.

5. Point out that when Skloot finally met the Lacks family, Henrietta's children were no longer young; there were both grandchildren and great-grandchildren who did not yet know the story of HeLa. Ask students what stories about the new generations seem to stand out. (For example, Deborah's son Alfred went to prison but while there acquired some education, began to teach other inmates, and wanted to make restitution. Her grandsons Davon and Alfred make a definite impression in the chapter about the visit to Zakariyya, and Davon was remarkably devoted to his grandmother. Near the end of the book, the story of Sonny's granddaughter, JaBrea, emphasizes the child's beauty.)

## Deborah and Her Siblings

**Directions:** Answer the following questions about the children of Henrietta and David Lacks.

1. How were Lawrence's experiences different from those of his brothers and sisters?
2. How would you describe Lawrence's responses to Rebecca Skloot's determination to write a book about Henrietta?
3. What caused Elsie's inability to communicate?
4. What happened to Elsie at Crownsville?
5. How did Sonny's attitude toward Skloot change?

6. Why did Sonny get involved in selling drugs?

7. What role did Deborah play in her brothers' lives?

8. Why did Deborah and Skloot become friends even though their lives were different in so many ways?

9. What do you see as the causes of Zakariyya's explosive anger?

10. "Where They Are Now" suggests that Zakariyya changed substantially. What caused those changes?

## What If?

**Directions:** In telling the story of HeLa and the woman behind it, Rebecca Skloot was bound by what really happened. Much of life is about cause-and-effect connections. How do you think the outcomes would have changed in the following circumstances?

1. What if Henrietta's cancer had gone into remission and enabled her to live until she was forty-one?
2. What if Henrietta's cancer cells had died, like all of the other tissues brought to Dr. Gey's lab?
3. What if Day had not been promiscuous despite a marriage that seems to have worked fairly well?
4. What if Skloot had cut class the day of the college lecture on HeLa?
5. What if Ethel had been kind and nurturing instead of vindictive and cruel?





## Lesson 7

# Organ and Tissue Donors

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### Objectives

- To understand the legal issues described in *The Immortal Life of Henrietta Lacks*
- To research and discuss current practice regarding organ and tissue donors and recipients

### Notes to the Teacher

Robin Cook's 1977 best seller *Coma* tells a chilling story of hospital patients and cadavers used as sources of organs for transplant. The ethical implications are clear. If doctors can now use donor organs to help patients with illnesses such as diabetes, what is to stop black-market operatives from developing lucrative businesses to cash in at the expense of unsuspecting patients and their families? While all evidence indicates that neither Johns Hopkins Hospital nor Dr. George Gey made a profit on HeLa, pharmaceutical companies eventually did, while the Lacks family remained very low-income.

In this lesson, students first focus on the experiences of John Moore and Ted Slavin, which are presented in chapter 25. In 1951, Henrietta and her family had no idea that her tissues were being used for medical research. During the 1970s, both of these men had rather different experiences with doctors and technologies. Students then look at laws and practices involved in tissue and organ transplants and in medical experiments today.

### Procedure

1. Point out that *The Immortal Life of Henrietta Lacks* began as an attempt to tell the story of the woman behind HeLa, but Rebecca Skloot obviously acquired a lot of other information along the way. Refer students to chapter 25 ("Who Told You You Could Sell My Spleen?"), and distribute **Handout 14**.

### ***Suggested Responses***

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1. The spleen is a small abdominal organ near the stomach. It belongs to the lymph system, and its job is to serve as a filter, part of a person's immune system, and provide protection from disease.
2. All forms of leukemia are cancers involving blood and/or bone marrow. Hairy cell leukemia involves a proliferation of one kind of white blood cell. The name comes from the hairlike growths on the cells.

3. After surgery, John Moore's body continued to produce valuable materials potentially useful in treating other persons' blood diseases. Moore thought the checkups were to monitor his health, but the doctor was using his blood for research and even for patent purposes.
  4. It is certain that John Moore would have had no idea what to do to make constructive use of his cells; however, Dr. Golde should have disclosed that his cells were being used for scientific research that could lead to the development of lucrative therapies.
  5. Moore sued, claiming that the doctors and researchers had "used part of me" for their own gain. The Los Angeles Superior Court rejected Moore's claim, but a California state court of appeal ruled that Moore had a right to share in the profits from what was essentially his personal property. Ultimately, the California state superior court agreed with the scientists and pharmaceutical companies that allowing patients to sue over the use of their cells would create an obstacle to biomedical research but ruled that doctors must disclose to their patients any "personal interest unrelated to the patient's health, whether research or economic, that may affect [their] medical judgment." Moore's effort to have his case heard by the U.S. Supreme Court was denied.
  6. John Moore died in 2001 in Seattle after an experimental treatment for his leukemia. Dr. Golde later became chief physician at New York City's Memorial Sloan Kettering Cancer Center. He died in 2004.
2. Distribute **Handout 15**, and ask students to answer the questions.

### ***Suggested Responses***

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1. Hemophilia is a blood disease that prevents normal clotting. While a healthy person's blood might clot soon after the body has been wounded, a hemophiliac will continue to bleed, sometimes to death.
2. Hepatitis, a viral infection that results in inflammation of the liver, can lead to cirrhosis and be fatal.
3. Ted Slavin had experienced many transfusions as treatment for his hemophilia, and some of the blood he received was infected with hepatitis; his body was able to produce immune factors for that disease, making his blood extremely valuable. Instead of seeking to profit from his patient, the doctor shared the information with Slavin.
4. Baruch Blumberg received the Nobel Prize in Physiology or Medicine in 1976 for his discoveries regarding infectious diseases such as hepatitis. Slavin's long-term cooperation with Blumberg led to important discoveries regarding hepatitis, cirrhosis, and their treatments. Dr. Blumberg died in 2011.
5. There are three types of hepatitis, designated by the letters A, B, and C. Hepatitis B is the most severe and is also prevalent. Some estimates indicate that 5 percent of the human population is infected with hepatitis B, qualifying it as an epidemic.

3. Point out that students are living in an age when medicine can accomplish things that seemed like science fiction to many people half a century ago. Those medical advances have brought with them many ethical and legal issues. Distribute **Handout 16**, and ask students to complete the exercise.

### ***Suggested Responses***

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1. The legislation expressly prohibits the sale but not the donation of body organs.
2. Sometimes donations are made on a one-to-one basis; for example, one sibling might donate a kidney or bone marrow to another.
3. The process of getting a driver's license involves a routine question about the desire to be an organ donor. For individuals who answer in the affirmative, this is indicated on the license. Sometimes people who are traffic fatalities can be donors of lifesaving organs to those on waiting lists.
4. Hearts, lungs, kidneys, livers, pancreases, and corneas can be transplanted, as can bone and skin tissue.
5. A careful matching process is used to try to prevent the possibility of a patient's body rejecting a transplanted organ, and screening attempts to prevent contagion of any type.
6. Donors cannot be paid for their organs, but they can receive money for items such as travel costs and living accommodations related to the transplant.
7. People can and do sell body products such as blood plasma, hair, ova, and semen. These are not considered organs.
8. Black markets in the sale of body organs do exist. A legal system for selling organs might help to quell the illegal market. It might also, however, lead to a situation in which the wealthy are moved to the tops of organ waiting lists while those with less money are forced to wait, perhaps until it is too late. Legalization of organ sales could easily lead to victimization of vulnerable people such as the homeless, runaways, and the mentally impaired. This is the kind of situation that Bobbette Lacks associated with Johns Hopkins Hospital's rumored use of bodies of African Americans.



4. Do you think Dr. Golde's actions were ethical? Why or why not?
5. Moore took his case to court, and it eventually reached California's Supreme Court. Use the Internet to read the court's decision, and summarize the main points.
6. What happened to John Moore and to Dr. Golde in the years after the trial?

## Ted Slavin's Powerful Blood

**Directions:** Answer the following questions.

1. What is hemophilia?
2. What is hepatitis?
3. How were Slavin's doctor's actions different from Dr. Golde's?
4. Describe the interaction between Slavin and Baruch Blumberg. What was the result?
5. How many types of hepatitis exist today? Are they a serious problem? Are they curable?







## Lesson 8

# Focus on Structure

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### Objectives

- To understand what is meant by the term *structure* in reference to written works
- To analyze the structure of one chapter in *The Immortal Life of Henrietta Lacks*
- To describe the structure of the book as a whole

### Notes to the Teacher

Students often find the concept of structure in fiction and nonfiction puzzling. In other realms, though, it seems obvious. A ranch-style house and a duplex are both homes, but they have different structures. Work boots and clogs are both attire for feet, but they are constructed quite differently. Structure has to do with organization—the order and arrangement of content.

In this lesson, students first look at different types of tents. You will need images of a pup tent, a dome tent, and a yurt. These are available at many Internet sites, including those associated with companies that market outdoor equipment.

Students then focus on chapter 33 (“The Hospital for the Negro Insane”) and analyze the way it is organized. Throughout the book, Rebecca Skloot deftly merges narrative with description and exposition; this chapter and many others demonstrate that craft at work. Finally, students look at the overall structure of the book and discuss reasons for the author’s choices. The Teacher Resource Page provides a synopsis of chapter contents.

### Procedure

1. Ask students how they would define the term *tent*. (A tent is a shelter, usually temporary, made from some kind of fabric and attached to the ground with ties or other devices. Tents are often easy to collapse and store.) Point out that there are several kinds of tents, and show the class a picture of a pup tent. Ask students to describe its structure. (Pup tents are usually small and have a wedge shape with a pointed roof; they are usually pitched right on the ground with no floor material.) Show a picture of a dome tent, and ask students how its structure differs from that of a pup tent. (Dome tents have rounded shapes and are often larger

than pup tents; they often have fabric floors.) Finally, show a picture of a yurt, and ask students to describe its structure. (Yurts are like houses, while pup tents are more like bedrooms. Yurts are built around solid frames such as metal or wood, and they can be used for extended periods of time.)

2. Explain that the contrasts in the three styles of tent illustrate what is meant by structure. Clarify with other examples of contrasting structures: polo versus T-shirt; A-frame versus bungalow; lasagna versus spaghetti.
3. Distribute **Handout 17**, and ask students to complete the exercise.

### ***Suggested Responses***

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1. Unstructured days do not have a fixed schedule. Most schools and many workplaces have highly structured schedules.
  2. The games take place on different floorings and use different tools; the players dress in very different ways; the games do not consist of the same number of divisions. One uses a small puck, the other a large ball.
  3. A haiku consists of three lines, each with a specific number of syllables; a sonnet has fourteen lines with a set rhythm and rhyme pattern.
  4. Both are fairly large instruments involving strings, but musicians play them in entirely different positions with totally different results.
  5. The story might be chronological, or the writer might use a flashback. Some stories are carefully framed; some are narrated in a stream-of-consciousness manner.
4. Emphasize that writers are concerned with structure: the order in which people, places, and events are presented, as well as the ways these elements are juxtaposed.
  5. Distribute **Handout 18**, and lead a discussion of the questions.

### ***Suggested Responses***

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1. The first sentence connects with Skloot and Deborah's past agreements, and it segues directly from the meeting at Johns Hopkins in the previous chapter.
2. The second paragraph links with previous information about the Lacks family, including Deborah's son's imprisonment and delightful Little Alfred.
3. The paragraphs provide a narrative describing Deborah and Skloot's entrance into the building.

4. The three of them talked, and then Paul Lurz unearthed a copy of a ledger that included information about Elsie.
  5. A descriptive paragraph provides a portrait of Elsie as distraught and victimized. The photo makes readers aware of Deborah's sister as an extremely vulnerable individual with no access to protection.
  6. Readers get the title of the article and then a summary of the situation at Crownsville in the 1950s, which stresses the way institutionalized people were used for medical experiments.
  7. Throughout the book, large spaces between paragraphs signify shifts in topic.
  8. The section stresses Deborah's agitation after the search for information about Elsie.
  9. Deborah was agitated, and this led to conflict.
  10. All of the topics that are part of this book are interrelated, and this chapter, like many of the others, connects them. In addition, as the narrative neared its close, the author probably wanted to keep readers interested and engaged.
6. Ask students to agree on a list of the book's major topics: Lacks family; Skloot's research; scientific/medical research; societal background; ethical issues. Explain that the class is now going to take a look at the overall structure of the book. Refer students to the table of contents, and point out that it identifies several of the book's structural elements. The chapters are framed by introductory and follow-up material. There are three general sections: "Life," "Death," and "Immortality." The titles suggest chronological and logical patterns.
  7. Divide the class into small groups, and assign the groups chapters to review for the way the content is organized; then have the groups report to the class as a whole. Ask the class to take notes on the contents of each chapter. (Note: This exercise also provides a useful review of the information in the book.)
  8. Distribute **Handout 19**, and conduct a discussion based on the questions.

### ***Suggested Responses***

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1. The chapters go back and forth between the story of Henrietta Lacks, scientific research, and Skloot's efforts to get information for the book she wanted to write.
2. Chapter 1 deals with Henrietta in 1951; chapter 2 backtracks to Henrietta's childhood and life before going to the hospital because of something strange in her body.
3. The "Life" section ends with the death of Henrietta Lacks.

4. The author chose to go back and forth among various topics, sort of weaving them together.
5. Part 2 begins with Henrietta's autopsy and funeral and ends with Dr. Gey's death.
6. Part 2 continues to interweave information about the Lacks family, research using HeLa, journalists' attempts to write about HeLa, and Skloot's efforts to gather information.
7. Henrietta's cells still appear to be immortal, and immortality might seem like a logical follow-up to death. *The Immortal Life of Henrietta Lacks* conveys a kind of immortality on all of the people in the story behind HeLa. There is also irony in the title, because the death of Deborah is related in this section.
8. Skloot's conversations with and travels with Deborah are central to these chapters.
9. The afterword deals with ethical issues but does not attempt to provide answers.
10. These sections reinforce Skloot's credibility as the author of the book.

## Content Synopsis

**Directions:** The following summary may help in responding to students' explanations of the order of presentation in the book.

### ***Introductory Material***

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A preface, a prologue, and a quotation from Deborah Lacks.

### ***Part 1: Life***

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**Chapter 1:** "The Exam . . . 1951": Deals with Henrietta Lacks in 1951 at Johns Hopkins Hospital.

**Chapter 2:** "Clover . . . 1920–1942": Flashes back to Henrietta from childhood to her move to the Baltimore area.

**Chapter 3:** "Diagnosis and Treatment . . . 1951": Focuses on cancer research and treatment and includes Henrietta at Johns Hopkins.

**Chapter 4:** "The Birth of HeLa . . . 1951": Deals with Dr. George Gey's lab.

**Chapter 5:** "'Blackness Be Spreadin All Inside' . . . 1951": Returns to Henrietta's life, treatment, and illness.

**Chapter 6:** "'Lady's on the Phone . . . 1999": Describes Rebecca Skloot's research, including her first contact with Dr. Pattillo.

**Chapter 7:** "The Death and Life of Cell Culture . . . 1951": Deals with scientific research.

**Chapter 8:** “A Miserable Specimen . . . 1951”: Returns to Henrietta and her worsening illness.

**Chapter 9:** “Turner Station . . . 1999”: Deals with Skloot’s research and her visit to Turner Station.

**Chapter 10:** “The Other Side of the Tracks . . . 1999”: Information about Skloot’s research, including her first visit to Clover.

**Chapter 11:** “‘The Devil of Pain Itself’ . . . 1951”: Culminates in the death of Henrietta Lacks.

### ***Part 2: Death***

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**Chapter 12:** “The Storm . . . 1951”: Includes the autopsy and the return of Henrietta’s body to Clover for burial.

**Chapter 13:** “The HeLa Factory . . . 1951–1953”: Focuses on scientific research and HeLa.

**Chapter 14:** “Helen Lane . . . 1953–1954”: Deals with journalists’ interest in HeLa’s source.

**Chapter 15:** “‘Too Young to Remember’ . . . 1951–1965”: Describes the Lacks children after Henrietta’s death.

**Chapter 16:** “‘Spending Eternity in the Same Place’ . . . 1999”: More on Skloot’s research in Clover.

**Chapter 17:** “Illegal, Immoral, and Deplorable . . . 1954–1966”: Returns to the subject of scientific research.

**Chapter 18:** “‘Strangest Hybrid’ . . . 1960–1966”: More on scientific research.

**Chapter 19:** “‘The Most Critical Time on This Earth Is Now’ . . . 1966–1973”: Deals with Henrietta’s children as adults, especially Deborah and Zakariyya.

**Chapter 20:** “The HeLa Bomb . . . 1966”: Goes back to the subject of scientific research, especially HeLa contamination.

**Chapter 21:** “Night Doctors . . . 2000”: Describes Skloot’s research, including her visit to Lawrence’s home.

**Chapter 22:** “‘The Fame She So Richly Deserves’ . . . 1970–1973”: Relates Dr. Gey’s death and discusses journalism focusing on HeLa.

### ***Part 3: Immortality***

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**Chapter 23:** “‘It’s Alive’ . . . 1973–1974”: Deals with the Lacks family’s learning about HeLa.

**Chapter 24:** “‘Least They Can Do’ . . . 1975”: Continues with the same subject.

- Chapter 25:** “Who Told You You Could Sell My Spleen?’ . . . 1976–1988”: Focuses on medical research, ethics, and the experiences of John Moore and Ted Slavin.
- Chapter 26:** “Breach of Privacy . . . 1980–1985”: Shifts back to Deborah and medical records about Henrietta.
- Chapter 27:** “The Secret of Immortality . . . 1984–1985”: Focuses on HeLa.
- Chapter 28:** “After London . . . 1996–1999”: Deals with Deborah’s experiences with the BBC and Cofield before she met Skloot.
- Chapter 29:** “A Village of Henriettas . . . 2000”: Includes Skloot’s first face-to-face meeting with Deborah.
- Chapter 30:** “Zakariyya . . . 2000”: Focuses on Skloot’s interaction with Deborah and Zakariyya.
- Chapter 31:** “Hela, Goddess of Death . . . 2000–2001”: Deals with Skloot and Deborah.
- Chapter 32:** “All That’s My Mother’ . . . 2001”: Relates the visit to Johns Hopkins to see HeLa cells.
- Chapter 33:** “The Hospital for the Negro Insane . . . 2001”: Describes the visit to Crownsville and the discovery of information about Elsie.
- Chapter 34:** “The Medical Records . . . 2001”: Continues with the story of the first real conflict between Skloot and Deborah regarding Henrietta’s medical records.
- Chapter 35:** “Soul Cleansing . . . 2001”: Continues with Deborah and Skloot’s visit with Gary at Gladys’s home.
- Chapter 36:** “Heavenly Bodies . . . 2001”: Continues that story.
- Chapter 37:** “Nothing to Be Scared About’ . . . 2001”: Tells about Deborah’s stroke and Skloot’s experience at the church.
- Chapter 38:** “The Long Road to Clover . . . 2009”: Explains Deborah’s death.

***Further Information***

Includes “Where They Are Now,” information about the Henrietta Lacks Foundation, an afterword, the “Cast of Characters,” a time line, and acknowledgments.

## A Matter of Structure

**Directions:** Structure has to do with organization and arrangement and has applications to just about everything, including written words. The more aware you become of structure, the easier it will be for you to recognize its importance. Answer the following questions about structure.

1. What would it mean if someone described his or her daily life as “unstructured”?
2. How does the structure of a hockey game differ from the structure of a basketball game?
3. Haiku and sonnets are both forms of poetry. How do they differ in structure?
4. How does a harp differ in structure from a piano?
5. What are some different ways a writer can structure a short story?



## Chapter 33: A Micro Look at Structure

**Directions:** Review chapter 33, “The Hospital for the Negro Insane,” and focus on its structure.

1. What does the first sentence accomplish?
2. How does the second paragraph connect with the past?
3. What happens in the next paragraphs, before the entry of Paul Lurz?
4. What events occurred immediately after Lurz met Rebecca Skloot and Deborah Lacks?
5. How does the photo of Elsie alter the structure of the prose?



## The Structure of *The Immortal Life of Henrietta Lacks*

**Directions:** Answer the following questions about the structure of the book as a whole.

1. What are the main topics in the eleven chapters in part 1, “Life”?
2. How are chapters 1 and 2 connected to each other?
3. Why does the section titled “Life” end after the information in chapter 11?
4. What order did the author use in presenting the information in chapters 1 through 11?
5. Why is part 2 titled “Death”?

6. What are the main topics explored in this section?
7. Why is part 3 titled “Immortality”?
8. What role do events involving Deborah play in this section?
9. What is the main content of the afterword?
10. How important are the acknowledgments and notes?

## Lesson 9

# Themes and Ideas

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### Objectives

- To recognize that *The Immortal Life of Henrietta Lacks* includes many themes, both explicit and implied
- To articulate themes and provide textual evidence supporting them

### Notes to the Teacher

The Common Core Standards for English Language Arts stress the ability to recognize multiple interconnecting themes, as well as the ability to provide supportive textual evidence. This is an excellent book for working with those standards. Students are aware from previous discussion that Rebecca Skloot addresses multiple topics. In this lesson, the class focuses on what the text says or implies about these topics.

Students first focus on scientific and medical research and related ethical issues. The book is not skeptical about science and clearly applauds advances that have greatly benefited untold numbers of people worldwide. We see that scientific research can be arduous and taxing, that it requires years of education and practice, and that it is based largely on trial and error. It is not a field for people who prefer quick and final answers.

Students then consider the interracial nuances that reverberate throughout the book. Henrietta Lacks lived and died in the Jim Crow South. African Americans then and for decades afterward had reasons to be suspicious about white society's motivations. News about the syphilis project at Tuskegee spread like wildfire in the 1970s, and Henrietta's descendants and their families found it difficult to trust Skloot. Hypocrisy in southern plantation life left a legacy: the belief that white people could not be trusted.

The book also focuses on the importance of informed consent for patients and on the key issue of money that underpins just about everything in our society. The fact is that neither Henrietta nor her family benefited financially from HeLa, nor did George Gey, his assistants, or Johns Hopkins Hospital. Patents later allowed pharmaceutical companies and individual researchers to cash in on HeLa. The book explores the question, Is there anything wrong with that?

These are not the book's only themes, and your students are likely to bring up other compelling ideas based on their reading and thinking. The book describes real people, and we see that they are, for the most part, neither all good nor all bad. David Lacks may have been a philanderer, but when he received money from a class action suit, he did not hoard it.

Deborah may have been filled with fear, but she was also thoroughly good-hearted. We see that both the good and the evil in people have ripple effects. Ethel's cruelty turned Joe/Zakariyya into an anger-filled man; kindness led to new generations of Lacks children taking happier and more prosperous paths through life.

### Procedure

1. Explain that a theme is more than just a topic; themes involve insights or perspectives about topics. Present the *topic* of life, and explain that writers' works can make a variety of points about life, constituting *themes*:
  - Life is all about survival of the fittest; the weak will die.
  - Life is fragile and transitory, so it is important not to waste it.
  - In life, if something can go wrong, it will go wrong.
  - Life is a journey, not a destination; we need to treasure the process of living day to day.
2. Ask students to freewrite about themes they identify in *The Immortal Life of Henrietta Lacks*. If necessary, prompt ideas with a few questions. (What did you think about Ethel's treatment of Henrietta and Day's young children? Why was Gary able to calm Deborah when she was so excited after the trip to Crownsville? How did Christoph Lengauer affect the Lacks family?)
3. Distribute **Handout 20**, and have small groups complete the exercise.

### ***Suggested Responses***

1. Patients are people, not objects or "abstractions," as Holocaust survivor and activist Elie Wiesel puts it in the quotation at the beginning of Skloot's book. It is also too easy for doctors and scientists to come to see their human subjects as lab animals and sources of knowledge rather than people in need of compassion. This attitude dehumanizes both the patient and the scientist.
2. The book shows that it is difficult but not impossible to transcend divisions along racial lines. Personal honesty and determination enabled Skloot to get past numerous barriers blocking her from the Lacks family in general and Deborah in particular. The two women with very different backgrounds were able to become friends.
3. Generosity and respect emerge as key values. Sharing knowledge with patients rather than withholding it for whatever reason is a respectful choice. Selfish exploitation of others is the main evil in the book, which has few actual villains. One is Ethel, who persecuted small children and had an enormous negative influence on Zakariyya. Another is Cofield, about whom there seems to be nothing positive to say.

4. Distribute **Handout 21**, and ask students to complete it individually. Follow with whole-class discussion.

### ***Suggested Responses***

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1. Without protection, people like Elsie are easily victimized and helpless to save themselves. Disabled persons can become targets for extermination, as happened in Adolf Hitler's Germany, or victims of medical experimentation, as occurred in the United States and elsewhere. There is a need for a humane society to protect these marginalized people and not exploit them.
2. We do not have to share Gary's beliefs to see that belief itself can have a healing effect; the incident also shows the importance of letting go of the burdens that hold us down and make us ill.
3. Lack of education mires people in poverty and all of its attendant ills. As the book ends, we see enormous hope for subsequent Lacks generations.
4. Chance experiences and opportunities can change a person's direction in life in unexpected ways and often with gratifying results.
5. Answers can vary widely. For example, Deborah's understanding of Zakariyya's need to express anger and his responses to her death seem to have resulted in a less alienated individual.

## Focus on Themes

**Directions:** Read the comments, and summarize the emerging themes.

1. *The Immortal Life of Henrietta Lacks* includes a lot of information about medical research and people involved in it. For example, Dr. George Gey obtained the cancer cells that became HeLa without Henrietta Lacks's knowledge. Mary Kubicek worked with HeLa, but not until attending the autopsy did she think of Henrietta as a real person. For personal profit and advancement, Dr. David Golde withheld information from John Moore. Dr. Chester Southam wanted to use patients at the Jewish Chronic Disease Hospital for experiments with HeLa. Dr. Christoph Lengauer extended kindness to Deborah and Zakariyya and suggested a way to share research benefits with the patients who helped scientists achieve breakthroughs.
2. Racial issues are also important in the book. When Henrietta went to the hospital in 1951, she had to use special areas restricted for people of color. The family's move to Maryland brought more money, but black men at Sparrows Point had the most menial jobs and the least pay. Bobbette expressed her certainty that Johns Hopkins doctors kidnapped black people for experimentation. Sexual relationships between white masters and black slaves are evident in their descendants, but the white Lacks couple in Clover denied that. From the first, Rebecca Skloot's color worked against her when she tried to interview Henrietta's descendants.
3. The book brings up many topics related to two key factors: informed consent and money. Today *informed consent* is a formal process whereby patients grant permission for medical procedures prior to the performance of those interventions; patients are also asked to grant permission for the use of their blood, tissues, and/or urine for medical research and to relinquish benefits from that research. Henrietta Lacks did not understand that radiation treatments would make her infertile. The Lacks family did not understand why their blood was taken. When Ted Slavin was informed of the value of his blood, he put it to good use. In a capitalistic society, money is always an important motive; however, Dr. Gey made no effort to use HeLa for his own financial security. Cofield, on the other hand, exemplifies greed.



## Implied Themes

**Directions:** Sometimes themes emerge very clearly; they may even be stated directly. Other times they are subtle, and we have to infer them. What are some of the themes expressed in the following situations?

1. Elsie Lacks is the most vulnerable person described in the book. What do her experiences suggest about human nature and life?
2. When Deborah Lacks and Rebecca Skloot visit Gladys and Gary, Gary seems to help Deborah with prayer, yet Skloot insists at various points in the book that she is not a religious person. What is the point?
3. Day quit school after the fourth grade, Henrietta after the sixth. Bobbette insisted that Deborah stay in school no matter what. Years later, Deborah hoped to go on to college. Near the end of the book, we hear of Henrietta's descendants going to college. What does the book suggest about education?
4. Skloot was a truant high school student who failed ninth grade and was more interested in dream studies than in science. She later earned a bachelor's degree in biology and a master's degree in journalism, and she wrote this best-selling book after years of research. Is there an implied theme there?
5. Think about a person or an event in the book that you found intriguing. What themes are either explicit or implied?

# Lesson 10

## Culminating Seminar

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### Objective

- To share ideas found in and generated from *The Immortal Life of Henrietta Lacks*

### Notes to the Teacher

This lesson closes the study of the book with student-dominated discussion. Your role should be as nonintrusive as possible; you will function more as a moderator than as an instructor. **Handout 22** introduces the concept of a Socratic seminar; participants sit in a circle, and the discussion is facilitated by a leader. You will want to select the leaders in advance and to equip them with **Handout 23**, which provides them with questions and directions for discussion. This will enable them to prepare for their leadership roles.

If your students have had little or no experience with Socratic seminars, you will want to introduce several basic guidelines in advance.

- Unlike other classroom situations, participants do not raise their hands to speak. Rather, the leader cues each individual when it is his or her turn to make a comment.
- Answers to questions can be opinions, but those opinions must be supported by textual references.
- The leader will present each question and indicate whether responses are mandatory or optional. The leader will also indicate which participant will answer first and the direction subsequent responses will take.
- For a Socratic seminar to work, participants need to be both respectful of one another and attentive to the subject matter.
- Discussion groups can be as small as five and as large as fifteen. You may want to have your class work in groups of six to eight; if possible, position the groups so that they cannot hear one another.

After the seminar, students complete self-assessments. They then respond in writing to a prompt.

## Procedure

1. Explain that this lesson will culminate the study of the book. If necessary, distribute **Handout 22**, and use it to explain or review the procedures involved in a Socratic seminar.
2. Divide the class into groups, each with an assigned leader, and distribute **Handout 23**. Have students review the questions and directions, and allow a few minutes for preparation. Then instruct leaders to initiate the discussions. As you monitor the discussions, you may occasionally find it necessary to help groups to keep the conversations going.

### ***Suggested Responses***

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1. In the nature of inquiry, answers can vary widely for all of the prompts. These are just examples: If students select Henrietta Lacks, they might want to ask what she thinks about the scientific achievements made possible by her cells: Was she amazed? How did these accomplishments make her feel about herself? Did the discoveries based on her cells make all of the pain worthwhile? What was the worst thing about dying so young? If students select Rebecca Skloot, they might want to ask about other books she hopes to write in the future.
2. Some readers get impatient with sections where the text deals at length with medical research and ethics. Others find those sections the most intriguing.
3. Day shared the money from the settlement with his grown-up children. Prison convicts explained their willingness to participate in medical research as a way to atone. Dr. Golde's treatment of John Moore seems to have been callous but not malicious. Cofield's actions, on the other hand, were reprehensible and seemed like the choices of a sociopath.
4. Imagine the record-keeping involved in sharing profits from HeLa with the Lacks family! Would there be time limitations on payments, as there are on patents? Would a onetime payment to donor and/or beneficiaries be more efficient?
5. As soon as nonfiction writers make changes in what actually happened, they begin to fictionalize. Words can, however, be omitted, as long as such omissions do not change the meaning of what was said. One example of an acceptable omission is the word that Deborah insisted Skloot not include in the book. Some books have faced censorship efforts in schools because of the writers' language choices. Could it be argued that changing the language in the *Adventures of Huckleberry Finn* would be a kind of lie?
6. Traffic fatalities often serve as sources of organs for transplant. Many people feel that, in the case of such an accident, they would like to know that their organs could at least be used to improve others' lives.
7. It is almost impossible to read the book without learning something new and confronting complicated issues.

3. When the discussions are completed, distribute **Handout 24** and ask students to complete it individually. Direct group leaders to write self-evaluations in paragraph form, including both what went well and anything that did not go well with their groups.
4. Ask students to write short letters to Skloot expressing responses to her experiences and to the book that resulted from them. Collect the letters as tickets out of class.

## What Is a Socratic Seminar?

**Directions:** Read the information to prepare to participate in a Socratic seminar about *The Immortal Life of Henrietta Lacks*.

Socrates was a Greek philosopher and teacher who lived in the fifth century B.C.E. and emphasized questions as the best way to promote learning. Socratic seminars, named for him, emphasize the importance of thought and discussion in pursuit of learning. The goal is inquiry rather than factual responses or debates.

1. Participants sit in a circle, not in rows, and they do not raise their hands in order to participate.
2. Each group has a leader, who presents discussion questions and facilitates participants' responses.
3. Some questions are optional, but most require input from all group members.
4. Responses to questions that directly address the text under discussion should include evidence from the work itself; this evidence can be quoted, paraphrased, or summarized.
5. Participants listen to and do not interrupt each other.
6. All participants are responsible for the success of the seminar, which focuses directly on the topics under discussion and should not include irrelevant comments.
7. Participants are asked to avoid distracting behavior and to extend respect to one another throughout the discussion.
8. At the end of the discussion, participants complete a self-evaluation.

## Culminating Discussion

**Directions:** To complete your discussion of *The Immortal Life of Henrietta Lacks*, you will be both a speaker and a listener in discussion of the following topics. Note that some of the topics are required, but others are optional.

1. If you had the opportunity for a face-to-face interview with one person mentioned in the book, who would it be? Why? What in the book interests you in that individual? What questions would you like to ask? (Everyone must answer this question, beginning with the person to the leader's right and proceeding counterclockwise.)
2. The book includes many subjects and is fairly long. Did you find yourself tempted to skim or skip some sections? If so, what topics tended to make you impatient and why? (Everyone must answer this question, this time beginning with the person to the leader's left and proceeding clockwise.)
3. Does the book seem to point out that human nature is essentially good or essentially evil? Are there any people who seem too good or too bad to be true? (This is an optional question that anyone can answer. Be ready to support your comments with supportive textual references. Signal the leader when you are ready to share your ideas.)
4. One unanswered question is whether people like the Lacks family should share in the profits that their family members' organs and tissues generate, rather than the money going solely to researchers and pharmaceutical companies. What do you think? (Everyone must answer the question, beginning with the first participant who volunteers and proceeding clockwise.)
5. Near the beginning of the book, Rebecca Skloot explains the decision to quote people exactly as they spoke or wrote; to do otherwise would be to lie about them. In other words, it is important not to censor people's language. Do you agree? (Everyone must answer this question, beginning with the person directly across from the leader. Your response should include textual references to *The Immortal Life of Henrietta Lacks* and/or other books with which you are familiar.)
6. Have you ever known anyone who volunteered to participate in testing a medical product or procedure? Have you ever known anyone on a waiting list for organ donation? Would you consider being an organ donor? (This is an optional question. Signal the leader when you want to express an idea.)
7. What is one big reason that people should read *The Immortal Life of Henrietta Lacks*? (Everyone must respond to this question, beginning with the leader and proceeding counterclockwise.)

## Socratic Seminar Self-Evaluation

**Directions:** Answer the following questions “Y” (yes) or “N” (no).

- \_\_\_\_\_ 1. Did you respond to all of the prompts that were mandatory when it was your turn?
- \_\_\_\_\_ 2. Did you offer responses to optional prompts?
- \_\_\_\_\_ 3. Did your responses reflect original thought?
- \_\_\_\_\_ 4. Did your responses include textual evidence?
- \_\_\_\_\_ 5. Did you listen attentively and respectfully to others’ comments?
- \_\_\_\_\_ 6. Did you avoid distracting comments and behaviors?
- \_\_\_\_\_ 7. If the discussion seemed to lag, did you help the group leader to get it going again?
- \_\_\_\_\_ 8. Did the other group members listen attentively and respectfully to your contributions?
- \_\_\_\_\_ 9. Did you gain any new insights into the book or about human nature and life during the discussion?
- \_\_\_\_\_ 10. Did the group maintain its focus throughout the discussion?

## Content Quiz

**Directions:** For each question, circle the letter of the best answer.

1. Henrietta Lacks grew up on a farm that specialized in
  - a. tobacco.
  - b. cotton.
  - c. rice.
  - d. soybeans.
2. Henrietta's birth name was
  - a. Martha.
  - b. Deborah.
  - c. Barbara.
  - d. Loretta.
3. Henrietta attended school through
  - a. fourth grade.
  - b. sixth grade.
  - c. eighth grade.
  - d. high school.
4. How many children did she have?
  - a. three
  - b. four
  - c. five
  - d. six
5. She died at the age of
  - a. twenty-nine.
  - b. thirty-one.
  - c. forty.
  - d. forty-five.
6. The cause of death originated as
  - a. lung cancer.
  - b. leukemia.
  - c. cervical cancer.
  - d. skin cancer.



7. The person responsible for the development of HeLa was
  - a. Dr. Roland Pattillo.
  - b. Dr. George Gey.
  - c. Dr. Howard Jones.
  - d. Dr. Christoph Lengauer.
  
8. Mary Kubicek was a technician at
  - a. Tuskegee Institute.
  - b. Sloan Kettering.
  - c. the Johns Hopkins maternity ward.
  - d. Dr. Gey's lab.
  
9. Ethel was most cruel to
  - a. Lawrence.
  - b. Sonny.
  - c. Deborah.
  - d. Joe.
  
10. Deborah first married a man with the nickname
  - a. Buddy.
  - b. Prince.
  - c. Cootie.
  - d. Cheetah.
  
11. The first facility built to work only with HeLa was at
  - a. Tuskegee Institute.
  - b. University of Pennsylvania.
  - c. Harvard.
  - d. Johns Hopkins University.
  
12. Cofield was
  - a. a technician working under Mary Kubicek.
  - b. a reporter for *Ebony*.
  - c. a con artist.
  - d. the owner of a large tobacco plantation.
  
13. One problem researchers encountered with HeLa was its
  - a. fragility.
  - b. tendency to contaminate other cultures.
  - c. uselessness after six weeks.
  - d. tendency to mutate.

14. HeLa's first big success was its contribution to fighting
- smallpox.
  - measles.
  - polio.
  - high blood pressure.
15. Who died in a mental hospital?
- Elsie
  - Henrietta's mother
  - Zakariyya
  - Mavis
16. The author of the book first became interested in HeLa when she was
- a high school student.
  - a college sophomore.
  - a journalist working for *Science*.
  - touring Johns Hopkins Hospital.
17. The person who told the author that Johns Hopkins doctors kidnapped African Americans was
- Deborah.
  - Zakariyya.
  - Sadie.
  - Bobbette.
18. Who calmed and consoled Deborah with prayer?
- Gary
  - Cootie
  - Sonny
  - Gladys
19. Who created a colorful image of Henrietta's DNA?
- Zakariyya
  - Christoph Lengauer
  - Little Alfred
  - Rebecca Skloot
20. Who sued a doctor over use of body tissues and products?
- Lawrence Lacks
  - Ted Slavin
  - John Moore
  - David Lacks

## Final Test

**Directions:** Respond to each of the following prompts in 100 to 150 words. Include textual evidence to support your answers.

1. Describe the structure of *The Immortal Life of Henrietta Lacks*.
2. Name and describe Henrietta's children.
3. Why was HeLa so important to scientific research?
4. How did Rebecca Skloot and Deborah Lacks influence each other?
5. To what extent did interracial relationships affect the Lacks family's experiences?
6. What ethical issues does the book raise for readers to consider?

## Science Lab Report Form

Use the following format to report on your lab experiences in conjunction with discussing *The Immortal Life of Henrietta Lacks*.

1. What was the purpose of the lab experience?
2. What equipment and materials did you use?
3. List in chronological order the steps in the procedure that you followed.
4. What did you observe?
5. What conclusions and questions resulted from your experience?
6. What type of lab experience would be an effective follow-up to this one?

# Supplementary Materials

## Answer Key

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### Content Quiz

- |      |       |       |       |
|------|-------|-------|-------|
| 1. a | 6. c  | 11. a | 16. a |
| 2. d | 7. b  | 12. c | 17. d |
| 3. b | 8. d  | 13. b | 18. a |
| 4. c | 9. d  | 14. c | 19. b |
| 5. b | 10. d | 15. a | 20. c |

### Final Test

1. Responses should include identifying the three sections by title: “Life,” “Death,” and “Immortality.” Students should also explain how Rebecca Skloot interweaves content regarding the Lacks family, medical research, cultural history, and her own process of conducting research to write the book. See Lesson 8 for details.
2. See Lesson 6 for information related to this topic.
3. Students should mention Dr. Gey and include the key role HeLa played in Dr. Salk’s development of the first successful polio vaccine, as well as the use of HeLa by scientists to test the responses of human cells to a variety of stresses, bacteria, and viruses. In addition, students should mention HeLa’s importance to the field of genetics.
4. Essays should mention the many differences between the backgrounds of the two women and the process and people involved in bringing them together, including the men in the Lacks family and Dr. Pattillo. Textual references should include the visit to Johns Hopkins Hospital to see Henrietta’s cells and the trip to Crownsville, as well as the visit with Gary and Deborah’s final choice to share Henrietta’s medical records with the author.
5. Answers should explain the Jim Crow system in 1951 and the fact that the medical establishment that treated Henrietta was entirely white. The marginalization of black men had an important effect on Henrietta’s husband, sons, and grandsons. Bobbette’s belief that Johns

Hopkins doctors kidnapped African Americans for research purposes exemplifies the tension and suspicion at work.

6. Key issues include patients' right to informed consent, as well as the responsibility of doctors to patients. The book also deals with ethical issues involved in experimenting on human beings and using their tissues or organs for research that leads to wealth for researchers and pharmaceutical companies but does not financially benefit the patient-donor, who may be poor. Textual evidence should include the Lacks family, as well as John Moore and/or Ted Slavin.

# Related Readings

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**Directions:** Read one of the following books, and write an essay or complete a project in which you relate it to *The Immortal Life of Henrietta Lacks*.

## Memoirs

*Black Like Me*, by John Howard Griffin. In 1959, a white man had medical treatment to darken his skin and then traveled through the South to experience firsthand the effects of bigotry. The memoir describes his experiences.

*Death Be Not Proud*, by John Gunther. Renowned writer John Gunther tells the story of his teenage son's diagnosis, treatment, and death from brain cancer in 1947.

*Night*, by Elie Wiesel. The author describes his memories of being sent with his family to Auschwitz and the atrocities he experienced and witnessed there.

*Notes Left Behind*, by Brooke and Keith Desserich. Parents share the story of their young daughter's struggle with brain cancer.

*Tuesdays with Morrie*, by Mitch Albom. The book tells about Mitch Albom's reunions with his favorite college professor when Dr. Morrie Schwartz was struggling to deal with the effects of Lou Gehrig's disease.

## Nonfiction

*Examining Tuskegee: The Infamous Syphilis Study and Its Legacy*, by Susan M. Reverby. A college professor investigates the people, events, and consequences of the syphilis project.

*Marie Curie: A Life*, by Susan Quinn. The book tells the story of the life and work behind the study of radiation and its uses.

*Microbe Hunters*, by Paul de Kruif. This book tells the stories of scientists involved in the early development of microbiology.

*Penicillin: A Breakthrough in Medicine*, by Richard Tames. The book investigates the story behind the creation of one of our most important antibiotics.

*Splendid Solution: Jonas Salk and the Conquest of Polio*, by Jeffrey Kluger. The author describes the life and work of the creator of the first polio vaccine.

*Virus Hunters: Thirty Years of Battling Hot Viruses around the World*, by C. J. Peters and Mark Olshaker. The authors deal with scientists' studies of and battles with viruses across the globe.

## **Drama**

*Wit*, by Margaret Edson. The winner of the 1999 Pulitzer Prize in Drama presents a woman in a hospital with advanced ovarian cancer.



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