

## AP BIOLOGY SEMESTER PROJECT- 2017

(\*note- I have around 12 copies of this book available for checking out. See me before the end of the current school year, if you would like to borrow one. First come, first serve!)

You will read a book that is very relevant and applicable to AP Biology: *The Immortal Life of Henrietta Lacks*. The book is assigned to facilitate and enhance lecture material throughout the semester and prepare you for the AP Biology exam. You will see that science is not always just “about the science.” A great deal of material has to be covered to prepare you for the AP exam and honestly, our time is limited to cover it all. Part of being a good scientist and good citizen is the ability to critically read and review material. This book will help you build those skills.

*The Immortal Life of Henrietta Lacks* not only delves into scientific discoveries but social and ethical issues as well; as I said, science is not always “just about the science.” So here’s the breakdown: Read *The Immortal Life of Henrietta Lacks* and answer the questions associated with each chapter (see assignment below). Notice that these questions are due at different times throughout the semester, so you do not necessarily need to read the entire book continuously. However, it is encouraged to read a significant portion initially in order to facilitate understanding, especially while covering topics related to Genetics, DNA, Micro-Evolution, Body Systems, etc.

While this is not a summer reading assignment, some of you may want to get started early. That’s the reason I decided to release this assignment prior to the end of this current school year. Regardless of when you start, it is an interesting book, so I hope you will enjoy it!

Mrs. Phillips

(\*See the following pages for the assignments associated with *The Immortal Life of Henrietta Lacks.*)

### **THE IMMORTAL LIFE HENRIETTA LACKS**

Below are about 300 questions based on *The Immortal Life of Henrietta Lacks* by Rebecca Skloot. As part of your grade for AP Biology (**1 test grade**), you will read the book and answer 80 of the 300 questions listed (this includes the 3 from the Prologue and 3 from Afterword “Where are They Now?”). **THESE MUST BE DONE IN A COMPOSITION NOTEBOOK** (google ‘composition notebook’ and look at the image to be sure you purchase the correct item). Additionally, if every submission is in ON TIME and done thoroughly (according to the criteria listed below), you will get the opportunity to do 40 additional questions and will be entitled to drop your lowest test grade (more about that later in the semester).

**Here are a few guidelines for the required 80:**

- You must NUMBER EACH PAGE IN YOUR COMPOSITION NOTEBOOK. Additionally, you must have a Table of Contents for each of the 4 submissions. Therefore, LEAVE FOUR BLANK PAGES at the front of the composition notebook for this purpose, before starting the questions. Each of the 4 TOC must include: Installment #, Chapter #, the #s of questions completed and the page number. You must answer at least one question from each chapter, including Prologue and Afterword.
- You may answer no more than three (3) questions from any one chapter. \*If there are only 3 questions total for the chapter, and you intend on doing the Extra Credit questions, then only do a maximum of 2 questions for that chapter.
- Your questions and answers (the answer for each must be **DIRECTLY** underneath the question) must be handwritten in your own personal composition journal (you must purchase). You must **CLEARLY** indicate the Installment Number (Installment 1, Installment 2, etc.) **PRECEDING EACH SET OF QUESTIONS**. You must also put the Chapter number before the questions (and answers) from that chapter. Leave some space (2-3 lines) between the chapters, so that I can easily find your answers.
- You will turn in your journal at each **due date** (listed below) clearly indicating the beginning and end of each installment set of questions. \*It must be well organized!
- All answers must be in your own words using proper terminology. Do not simply copy what you find from a web site. The penalty will be significant if you do!
- This is **NOT** a Group Assignment!

<b>FIRST INSTALLMENT DUE (Prologue &amp; Ch 1-9):</b>	20 questions due on Friday, 8/11/17
<b>SECOND INSTALLMENT DUE (Ch 10-19):</b>	20 questions due on Friday, 9/8/17
<b>THIRD INSTALLMENT DUE (Ch 20-29):</b>	20 questions due on Friday, 10/6/17
<b>FINAL INSTALLMENT DUE (Ch 30-38; Afterword):</b>	20 questions due on Friday, 11/10/17

**I WILL AVERAGE THE 4 GRADES (ABOVE) FOR ONE TEST GRADE**

**\*SEE NEXT PAGE REGARDING EXTRA CREDIT**

**Guidelines for the optional 40 questions:**

These must be in a **separate** journal, with a Table of Contents, numbered pages and **only if you qualify**. To qualify, each of these must be met on **EVERY** installment: 1- submitted on time, 2- proper format, 3- question answered thoroughly, 4- Minimum grade of 95 on each required installment. You must **handwrite the questions and answers**, as were done for the required 80. **Due date:** Monday, December 8. You must have one question from each chapter and no more than 3 questions/ chapter.

**Here are the 300 questions from which you will choose 80, according to the guidelines above:**

**Prologue: The Woman in the Photograph**

1. What is mitosis? What beneficial biological processes involve mitosis?
2. What happens when there is a mistake during the process of mitosis?
3. According to Defler, how important was the discovery of HeLa cells?

**Chapter One: The Exam**

1. What did Henrietta's first doctor assume the source of the lump on Henrietta's cervix was? What stereotype or bias might this assumption be based upon?
2. Why did David Lacks take Henrietta to the public wards at Johns Hopkins instead of a closer hospital?
3. Explain what the Jim Crow laws were.
4. What did Howard Jones find "interesting" about Henrietta's medical history? What does this finding suggest about Henrietta's cancer?

**Chapter Two: Clover**

1. How old was Henrietta when she had her first child with Day?
2. What was different about Henrietta's second child, Elsie?
3. Compare the medical terms describing Elsie's condition with the terms used by Henrietta's friends and family. What are the connotations of the two sets of terms?
4. Contrast the working conditions of black workers and white workers at the Sparrows Point Steel Mill.

**Chapter Three: Diagnosis and Treatment**

1. How are different types of cancer categorized?
2. Summarize Dr. TeLinde's position in the debate over the treatment of cervical cancer.
3. Explain how the development of the Pap smear improved the survival rate of women diagnosed with cervical cancer.
4. How did doctors justify using patients in public hospital wards as medical research subjects without obtaining their consent or offering them financial compensation? Do you agree or disagree with their reasoning? Explain your answer.

5. How did TeLinde hope to prove that his hypothesis about cervical cancer was correct?
6. What was George Gey's position at Johns Hopkins?
7. Explain what an immortal cell line is.
8. Explain how TeLinde and Gey's relationship led to Gey obtaining a tissue sample from Henrietta's tumor.
9. Analyze the consent statement that Henrietta signed on page 31. Based on this statement, do you believe TeLinde and Guy had the right to obtain a sample from her cervix to use in their research?
10. Do you think Henrietta would have given explicit consent to have a tissue sample used in medical research if she had been asked? Do you think she would have understood what was being asked of her? Explain your answers.
11. Were cells taken only from black patients? Were black patients generally treated differently from white patients in the early 1950s? Explain your answers.

#### **Chapter Four: The Birth of HeLa**

1. Summarize the main obstacles Gey and his assistants faced in their effort to grow cells.
2. Where did the name "HeLa" come from?
3. Explain how Gey's roller-tube culturing technique works.
4. What happened to the HeLa cells that Mary cultured?
5. Gey chose to give away samples of HeLa to his colleagues almost immediately. Do you think this was a good decision? Explain your answer.
6. Once HeLa started growing, was Henrietta informed that her cells were being used in Gey's research?
7. What is the implication of the author's decision to use the term "birth" to describe the initial growth of HeLa cells?

#### **Chapter Five: "Blackness Be Spreadin All Inside"**

1. After her diagnosis and treatment, how did Henrietta behave? What can you infer about her personality based on this behavior?
2. According to Ethel's cousins, why did she dislike Henrietta?
3. What was Elsie's early life like?
4. Why did Henrietta and David (Day) Lacks decide to place Elsie in the Hospital for the Negro Insane?
5. What specific details let the reader know that sending Elsie away was difficult for Henrietta?
6. Why do you think Henrietta initially chose not to tell people about her cancer diagnosis? What does this decision suggest about Henrietta's personality?
7. What important information did Henrietta's doctor fail to give her before starting her cancer treatment? How did she react when this information was eventually shared with her?

#### **Chapter Six: "Lady's On the Phone"**

1. What do the Tuskegee Syphilis Study and the Mississippi Appendectomies suggest about the history of African Americans and medicine?
2. What does Pattillo tell Skloot about Elsie Lacks?
3. How does Deborah Lacks initially respond to Skloot's request for information?
4. What questions does Deborah have about her mother?

### **Chapter Seven: The Death and Life of Cell Culture**

1. What did Gey hope to accomplish with HeLa cells?
2. What did HeLa allow scientists to do for the first time?
3. Who was Alexis Carrel? Why did he win the Nobel Prize?
4. How did the media react to Carrel's announcement that he had grown immortal chicken heart cells?
5. What controversial beliefs did Carrel have?
6. Give an example of propaganda that was used to fuel the public's fear and distrust of tissue culture.
7. What details suggest that Carrel's claims about the immortal cell line were not scientifically sound?

### **Chapter Eight: "A Miserable Specimen"**

1. After her initial round of treatment, what did Henrietta's doctors assume about the effectiveness of the radium therapy?
2. How did her doctors react to Henrietta's intuitive conviction that the cancer was spreading inside of her?
3. When did the doctors realize that Henrietta had been correct about the growth of her cancer?
4. What objective details suggest that Henrietta was in extreme pain at this point in her illness?
5. What does the use of the term "a miserable specimen" by Henrietta's doctors reveal about their attitude toward her?

### **Chapter Nine: Turner Station**

1. How does Skloot proceed with her research when it becomes clear that Sonny Lacks is not going to meet with her?
2. What does the fact that the town still has "more than ten churches" suggest about the people in Turner Station?
3. Who is Courtney "Mama" Speed, and how is she connected to Henrietta Lacks?
4. Make a prediction based on the foreshadowing regarding Mr. Cofield. What do you think Cofield did?
5. What does Skloot realize after watching the BBC documentary about HeLa?

### **Chapter Ten: The Other Side of the Tracks**

1. What illness did Cootie have as a child?
2. Cootie seems to know and understand a little bit about HeLa cells, but he believes that Henrietta's spirit is still present in her cells. What does Cootie think about the reason that HeLa cells were used to develop a polio vaccine?
3. Where does Cootie think Henrietta's cancer came from?

### **Chapter Eleven: "The Devil of Pain Itself"**

1. Describe the progression of Henrietta's cancer in the eight months between her diagnosis and her death.
2. Why did doctors stop giving Henrietta blood transfusions?
3. What did Henrietta's friends and family do when they found out that she needed blood? Why do you think they were willing to sacrifice to help her?
4. What was Henrietta's final request? What does this request tell you about her?

### **Chapter Twelve: The Storm**

1. Why did Henrietta's doctors need to ask for her family's permission to remove tissue samples after her death? How did Day initially respond to their request?
2. What made Day change his mind and allow the autopsy?
3. What did Mary, Gey's assistant, realize when she saw Henrietta's painted toenails? How was the timing of this realization ironic?
4. What happened when the family started to bury Henrietta's body?

### **Chapter Thirteen: The HeLa Factory**

1. Explain how a neutralization test is used to determine a vaccine's efficacy.
2. What unusual characteristics of HeLa cells made them ideal for use in the polio vaccine trials?
3. Why did the Tuskegee Institute become involved in the mass production of HeLa cells? Describe the depth of the Institute's involvement.
4. Paraphrase the explanation of how a virus reproduces found on page 97. Why did the fact that HeLa cells are malignant make them particularly useful in the study of viruses?
5. Why was the development of methods of freezing cells an important scientific breakthrough?
6. Why is standardization important in scientific research?
7. Why did scientists want to be able to clone cells for research?
8. Explain the contribution that HeLa made to the emerging field of genetics.
9. Describe the role Microbiological Associates played in the development of the field of cell culture, and the industry of selling HeLa cells and other human biological materials.
10. Who profited monetarily from the sale of HeLa cells and other human biological materials?
11. In what ways, if any, did Gey personally profit from the development of HeLa?

### **Chapter Fourteen: Helen Lane**

1. How soon after Henrietta's death did the media attempt to write about her?
2. What reasons did Berg give for wanting information about the woman whose cells were used to grow HeLa?
3. How did TeLinde, Gey, and others at Johns Hopkins respond to Berg's request? Why did they respond this way?
4. Summarize the various factual errors that appeared in the stories about HeLa.
5. Why didn't Henrietta's family know that her cells were still alive?

### **Chapter Fifteen: "Too Young to Remember"**

1. How old were Henrietta's oldest (Lawrence) and youngest (Joe) children when their mother died?
2. What reason did Ethel and Galen give for moving in with Day after Henrietta's death?
3. What did some family members think was the real reason Ethel moved in?
4. Describe the abuse that Joe suffered under Ethel's care. How did this abuse affect him?
5. Describe Deborah's childhood. What challenges did she have to overcome?

6. What questions did Deborah have about her mother and sister? Why do you think no one told her very much about them?

### **Chapter Sixteen: “Spending Eternity in the Same Place”**

1. Describe Skloot’s visit to the Lacks family cemetery. What impact does her use of imagery have on you as a reader?
2. According to Henrietta’s cousin Cliff, what is “beautiful” about the idea of “slave-owning white Lackses being buried under their black kin”?
3. Compare and contrast the different attitudes the white and black Lacks family members held about race.

### **Chapter Seventeen: Illegal, Immoral, and Deplorable**

1. What was Chester Southam concerned that HeLa cells might do?
2. Describe the experiment that Southam developed to test his hypothesis about HeLa.
3. Who were the test subjects in Southam’s first study? Were they informed about the research and its risks?
4. What was the result of Southam’s first research study? Based on these results, did his hypothesis appear to be correct?
5. Where did Southam find test subjects for his second research study?
6. Based on the results of the second study, what two things did Southam believe that injections of HeLa cells might be able to do?
7. How did Southam justify his decision to inject HeLa cells into patients without their knowledge or consent?
8. What does the term “informed consent” mean?
9. Why, specifically, did the Jewish doctors at the Jewish Chronic Disease Hospital object to Southam’s cancer study?
10. What is the purpose of the Nuremberg Code? What events led to it being developed?
11. According to State Attorney General Louis Lefkowitz, what do people have an “inalienable” right to?
12. What was the result of the legal action taken against Southam and Mandel?
13. Explain how the action against Southam and Mandel led to the development of informed consent forms as a standard medical practice.

### **Chapter Eighteen: “Strangest Hybrid”**

1. Summarize the various ways that HeLa was used in the space program.
2. What disturbing discovery did scientists make about the way HeLa responded in orbit?
3. Why did a committee of scientists form the American Type Culture Collection (ATCC)?
4. Explain what happens during somatic cell fusion.
5. Why did scientists want to fuse human and animal cells?
6. What scientific discoveries were made possible as a result of fused hybrid cells?
7. How did the public respond to the idea of cell hybrids? In what specific ways did the media influence the public’s perception of cell hybrids?

### **Chapter Nineteen: “The Most Critical Time on This Earth is Now”**

1. How did Bobette respond to Deborah’s pregnancy?
2. How was Joe’s life different from his brothers’ lives? What do you think caused this difference?
3. What crime did Joe commit?
4. How did Day, Sonny, and Lawrence respond to Joe’s crime? What did they want Joe to do?
5. Why do you think Joe turned himself in to the police?
6. Analyze the note that Joe wrote to the judge. What does it tell you about Joe’s personality and background?
7. What was the lawyer’s main argument in Joe’s defense?
8. How did prison change Joe?
9. Describe Deborah and Cheetah’s marriage.
10. Why didn’t Deborah go through with her plan to kill Cheetah? What did she do instead?

### **Chapter Twenty: The HeLa Bomb**

1. Explain the meaning of the idiomatic expression “to drop a bomb.”
2. What did Stanley Gartler discover about eighteen of the most commonly used cell cultures?
3. How was Gartler able to link the contamination problem to HeLa?
4. What unique abilities did HeLa have that allowed it to contaminate cultures without researchers being aware that contamination had occurred?
5. Why would HeLa contamination be a problem for researchers?
6. What is “spontaneous transformation”? What did Gartler suggest about spontaneous transformation?
7. How did the scientific community respond to Gartler’s theory about HeLa contamination?

### **Chapter Twenty-One: Night Doctors**

1. What does the author’s choice of descriptive details reveal to the reader about her impression of Sonny Lacks?
2. Explain the connection that Sonny makes between his mother’s personality and the ways he believes HeLa cells have been used.
3. Sonny and Lawrence repeat the refrain “That’s a miracle,” when discussing the scientific advances made possible by their mother’s cells. What does this refrain suggest about their worldview and values?
4. What are “night doctors?” Where did the term originate and why? What do the Lackses believe “night doctors” do? Is their belief based on real events? Explain your answer.
5. Why did Johns Hopkins start a medical school and hospital in a poor black neighborhood? What purpose was the school/hospital intended to serve?
6. What does the 1969 Johns Hopkins study reveal about the researcher’s attitude and assumptions about race?
7. What is the Lacks family’s biggest complaint about the way they have been treated by Johns Hopkins and Dr. Gey?

### **Chapter Twenty-Two: “The Fame She So Richly Deserves”**

1. What type of cancer was George Gey diagnosed with?
2. What specific request did Gey make prior to going into surgery? Why didn’t his surgeons honor his request?

3. After finding out that his cancer was terminal, what reason did Gey give for his decision to offer himself as a research subject?
4. Did Gey benefit or profit in any way from his participation in the research studies?
5. Do Gey's attitude and actions after his own diagnosis of terminal cancer change your opinion of him? Explain your answer.
6. What did Howard Jones realize when he reviewed Henrietta's medical records?
7. Do you agree that Henrietta should have been correctly identified in order to "give her the fame she so richly deserves," or do you think her anonymity should have been protected? Explain your answer.

### **Chapter Twenty-Three: "It's Alive"**

1. The title of this chapter contains an allusion to the classic horror movie *Frankenstein*. What does this allusion suggest about the tension between scientific discovery, and public perception and fear of such discoveries?
2. How did Bobette find out about HeLa?
3. How long had Henrietta been dead when her family found out that her cells were still alive?
4. Why did researchers want DNA samples from Henrietta's family?
5. Did researchers explain why they wanted DNA samples to the Lacks family? Did the family give informed consent for the research done on those samples?
6. Why did the Lacks family think the doctors were taking their blood?
7. From a legal standpoint, how is the fact that the doctors failed to obtain consent prior to taking blood from the Lacks family in 1973 different from their initial failure to obtain consent from Henrietta in 1951?
8. What were some of Deborah's fears and concerns after she found out that her mother's cells were still alive?
9. Why did advances in genetic research necessitate establishing the legal requirement that doctors or researchers obtain informed consent documentation prior to taking DNA samples from patients for research?
10. Analyze the last paragraphs of this chapter. What does Hsu's request reveal about her attitude towards the Lackses? What does Skloot reveal by ending the chapter with Hsu's request?

### **Chapter Twenty-Four: "Least They Can Do"**

1. What motivated Michael Rogers to find the Lacks family?
2. How did Rogers discover Henrietta's real name?
3. Describe Rogers's interaction with the Lacks family.
4. Paraphrase the paragraph in Rogers's article that the Lacks family found extremely upsetting. What conclusion did they draw about George Gey and Johns Hopkins?
5. What facts about George Gey's life support the assertion that he never personally profited from the development of HeLa?
6. Explain how the sale of HeLa evolved into a business. Describe the extent to which the profits from that business are likely a direct result of the sale of HeLa cells. In what other ways do scientists, corporations, and individuals profit as a result of HeLa?
7. Why did Deborah begin researching her mother's cells? What effect did her research have on her?
8. What information about the Lackses was published by McKusick and Hsu? Why is the publication of this information troubling from an ethical and legal standpoint?

9. Why do you think Skloot ends this chapter with the introduction of John Moore's story?

### **Chapter Twenty-Five: "Who Told You You Could Sell My Spleen?"**

1. Describe the lawsuit that set a legal precedent for patenting biological "products" such as cell lines.
2. Why did Ted Slavin start Essential Biologicals?
3. Why did scientists find the Moore lawsuit deeply troubling?
4. Summarize the pros and cons of giving patients legal ownership of their cells.
5. What was the Supreme Court of California's decision regarding the Moore lawsuit? Summarize the reasoning behind the decision.
6. Do you agree with the court's ruling? Explain your answer.

### **Chapter Twenty-Six: Breach of Privacy**

1. Describe the changes that had taken place in the lives of Henrietta's children by 1980.
2. Why did Zakariyya decide to participate in research studies at Johns Hopkins? What is ironic about his participation in these studies?
3. Why did Deborah choose not to request a copy of her mother's medical records?
4. How did Deborah react after reading about her mother's death?
5. Explain why Gold's journalism could be considered irresponsible and/or unethical
6. What do Gold's comments about his decision to publish private information without consulting the Lacks family reveal about his attitude toward them?
7. How have laws regarding medical privacy changed since the early 1980s?

### **Chapter Twenty-Seven: The Secret to Immortality**

1. Explain how the human papillomavirus (HPV) causes cervical cancer.
2. Are scientists able to definitively explain why HeLa grew so powerfully?
3. Explain the theories that Henrietta's family have about why her cells are so powerful.
4. Describe the contribution that HeLa has made to research on the HIV virus and the AIDS epidemic.
5. Explain Van Valen's theory that HeLa cells are "no longer human." Was his theory accepted by the scientific community?
6. According to Stevenson, why did scientists develop the argument that HeLa cells are no longer human?
7. Who do you think makes the more persuasive argument, Van Valen or Stevenson?
8. Explain the Hayflick limit.
9. Why are HeLa cells able to live beyond the Hayflick limit?

### **Chapter Twenty-Eight: After London**

1. What did Deborah hope would happen as a result of the BBC documentary?
2. What motivated Pattillo to organize the HeLa Cancer Control Symposium?
3. Carefully reread the speech Deborah gave at Morehouse College, paying particular attention to her repetition of the word "understanding." Why do you think understanding HeLa was so important to Deborah? What obstacles does she mention as impeding her understanding?
4. How did the people in Turner Station react to the presence of the BBC film crew and news of Henrietta's newfound "fame"?
5. What was ironic about the creation of Speed and Wyche's Henrietta Lacks Foundation?
6. Why did Deborah agree to help Speed and Wyche with their museum project?
7. Describe the attempts Wyche made to get recognition for Henrietta and her family.

8. Describe Keenan Kester Cofield. Why did he get involved with the Lacks family?
9. How did Deborah discover the truth about Cofield?
10. What did Cofield do when he realized that the Lacks family had blocked his access to their family records? What were the results of his actions?
11. Explain Deborah's fears regarding her sister, Elsie.

### **Chapter Twenty-Nine: A Village of Henriettas**

1. Why do you think Deborah eventually decided to talk with Skloot?
2. What specific things did Deborah ask Skloot to promise she would do?
3. Explain the significance of the gift that Skloot delivered to Deborah at their first meeting.
4. What did Deborah hope would happen as a result of Skloot's research about Henrietta?
5. What effect did sensationalized journalism and fiction about HeLa and cell cloning have on Deborah?  
Do you think this was the response that the writers intended?
6. What information about her mother was Deborah unwilling to share with Skloot? Why do you think she was so protective of this information?

### **Chapter Thirty: Zakariyya**

1. Why wasn't Skloot excited about meeting Zakariyya?
2. What does Zakariyya's choice of words—"that damn doctor who done rape her cells"—reveal about his feelings about and perception of what Gey did?
3. Describe your first impression of Zakariyya.
4. What does Deborah do that illustrates that she has a great sense of humor?
5. Look back over Skloot's description of Zakariyya's apartment. What do the contents of the apartment tell you about his life and personality? What is important to him?
6. What does Zakariyya believe about his birth?
7. When Skloot met Sonny and Lawrence, they expressed a belief that the medical advances made possible by their mother's cells are "a miracle." How do Zakariyya's beliefs differ from those of his brothers?
8. Zakariyya uses the term "disrespect" to describe Gey's treatment of Henrietta and the family. Explain the specific reasons why Zakariyya feels disrespected. Do you believe Gey was disrespectful?  
Explain your answer.
9. What does Zakariyya blame on Henrietta's cancer cells? Does Deborah agree with him?
10. What gift does Deborah give Zakariyya? Do you think Zakariyya should be the one to have this object? What does this gift tell you about Deborah's feelings about her family?

### **Chapter Thirty-One: Hela, Goddess of Death**

1. What does Deborah say about people who frame her mother's story as a story about racism?
2. Contrast the experience Henrietta's great-grandchildren, Alfred and Davon, have at the Maryland Science Center with the experience Deborah, Sonny, and Lawrence had growing up.
3. How did Skloot finance the research for her book? What did she promise to do for the Lacks family if and when the book was published?
4. Explain why it would be easy to believe that the Marvel super villain, Hela, Goddess of Death, was based on Henrietta Lacks.
5. Describe the relationship between Deborah and her grandson Davon.
6. Who is Franklin Salisbury Jr., and why did he contact Deborah?

7. Why did Deborah decide to go see her mother's cells? What obstacle almost kept her from doing so?

### **Chapter Thirty-Two: "All That's My Mother"**

1. Compare and contrast Skloot's, Deborah's, and Zakariyya's interactions with the Jesus statue at Johns Hopkins. What do these interactions reveal about their attitudes toward religious faith?
2. Analyze the way that Christoph Lengauer interacts with the Lacks family. Why do you think his interaction is so different from anyone the Lackses encountered at Johns Hopkins up until this point?
3. What is Lengauer's attitude toward the HeLa contamination problem? What belief of Deborah's does his attitude affirm?
4. Describe the way that Deborah and Zakariyya interact with their mother's cells.
5. What important misunderstanding about HeLa does Lengauer clarify for Deborah?
6. What does Lengauer believe about the Lackses' right to be financially compensated for the sale of their mother's cells?
7. Why do you think Deborah tells Skloot that she "just witnessed a miracle"?

### **Chapter Thirty-Three: The Hospital for the Negro Insane**

1. Does the title of this chapter evoke an emotional response from you? Why do you think Skloot chose this title?
2. Compare the connotations of the name "Crownsville" with the name "Hospital for the Negro Insane." What do you think the directors were trying to achieve when they renamed the facility?
3. Why did Deborah and Skloot travel to Crownsville?
4. Why was Skloot surprised by the appearance of Crownsville? What do you think she expected to find?
5. Who is Paul Lurz? Which comments of his foreshadow that something terrible happened to Elsie?
6. Why were the hospital's medical records from the 1950s and earlier disposed of?
7. What part of Elsie's medical records did Lurz have? Why had he saved patients' medical records? Why was he surprised that he had Elsie's records in particular?
8. Skloot carefully describes the photograph of Elsie. What specific things can you infer about Elsie's treatment based on the description of the photograph?
9. How does Deborah demonstrate that she is in control when her right to view Elsie's records is questioned?
10. Describe conditions at the hospital during the time period when Elsie was a patient there.
11. Compare and contrast the medical research likely performed on Elsie with Gey's research and Southam's research. Does some medical research seem "more wrong"? Why do you think you feel that way?
12. What does Deborah's comment to Lurz that "if you gonna go into history, you can't do it with a hate attitude" tell you about the type of person she is?
13. How did Deborah initially react to the news about her sister? How did her reaction evolve after she had a chance to dwell on the picture and process the disturbing information that she had been given?
14. Skloot ends this chapter with Deborah deciding to finally give her access to Henrietta's medical records. Explain why this moment is significant.

### **Chapter Thirty-Four: The Medical Records**

1. How does Deborah respond when Skloot suggests photocopying some of Henrietta's records? Why do you think she responds this way?
2. How can you tell that Elsie's photograph and autopsy are deeply troubling to Deborah?

3. What causes the confrontation between Deborah and Skloot? How is it resolved?
4. What reason does Deborah give for not wanting Skloot to type out Henrietta's records word-for-word?
5. Why do you think Deborah breaks out in hives after visiting Crownsville and giving Skloot access to the medical records?

### **Chapter Thirty-Five: Soul Cleansing**

1. How are Gladys and Gary related to Deborah?
2. Gary tells Deborah that her quest to find out about Elsie and Henrietta has been a way of "honoring her mother." Explain what he means by saying this.
3. After witnessing the amount of physical and emotional anguish that Deborah is in, Gary begins to preach and lay hands on Deborah. What burden does he ask to be lifted from Deborah? Where does he ask the burden to be placed?
4. How does Deborah respond after Gary's prayer?

### **Chapter Thirty-Six: Heavenly Bodies**

1. Summarize Gary's spiritual explanation for why Henrietta's cells lived on after her death.
2. Discuss the impact that witnessing the interaction between Gary and Deborah—and, later, talking with Gary—had on Skloot. What new perspective did she gain after these experiences?

### **Chapter Thirty-Seven: "Nothing to Be Scared About"**

1. What physical ailments did Deborah suffer from as a result of the excitement and stress of seeing her mother's cells for the first time, and learning about Elsie?
2. Why did Deborah decide to go back to school?
3. Why was Deborah unable to attend the National Foundation for Cancer Research's Henrietta Lacks conference?
4. Explain how Davon's heroic actions saved Deborah's life.
5. What obstacle kept Deborah from realizing her dream of returning to school?
6. What did Pullum ask Skloot to "preach" about at JaBrea's baptism?
7. According to Deborah and Pullum, how is Henrietta's story going to be different for Henrietta's great-grandchildren and future generations?

### **Chapter Thirty-Eight: The Long Road to Clover**

1. What string of events in 2009 suggests that, if Skloot had not begun researching Henrietta's story a decade earlier, it may have been lost forever?
2. At the time of this book's publication, how had the lives of Henrietta's great- and great-great-grandchildren been affected by Skloot's research and by the knowledge and understanding of Henrietta's contribution to science?
3. Skloot begins and ends the book with Deborah's voice. How does this choice impact the reader's experience of the story?

### **Where They Are Now/Afterword**

1. How did Deborah's death change the lives of her brothers?
2. What legal options do the Lackses have? What is their position on suing over the use of HeLa?
3. If Henrietta Lacks could know how important her cells have been to science, do you think she would approve of the fact that they were taken from her without her knowledge or consent? Explain your answer.