

Conjuring the Medical Impact from Black Philadelphia's Hidden History

Honors 11th Grade English Language Arts & STEM Integration

Unit Length: 4-5 Weeks

Core Text: The Immortal Life of Henrietta Lacks by Rebecca Skloot

Stage 1 – Desired Results

Big Ideas:

The hidden histories of Black medical institutions and healthcare in Philadelphia
STEM & Ethics: The role of science, medical research, and race in shaping
medical advancements

Reclaiming Voices: How narrative and investigative research bring forgotten
histories to light

Power, Exploitation & Resistance: The impact of systemic racism on Black health
and medical progress

Community & Legacy: Honoring the contributions of Black medical professionals
and institutions

Essential Questions:

What is the role of Black medical institutions like Mercy Douglass Hospital in
shaping health equity?

How do scientific and medical advancements intersect with race, ethics, and
history?

Why are some stories, like Henrietta Lacks' and Mercy Douglass Hospital's
hidden or erased?

How can we conjure voices of the past through research and storytelling?

What obligations do scientists, historians, and journalists have in telling
marginalized histories?

Learning Goals (Students Will Understand That...):

Black Philadelphians played a critical but often erased role in medicine and
healthcare history.

STEM and race intersect, influencing access to medical advancements and
research ethics.

Mercy Douglass Hospital was a hub for Black medical professionals, yet remains
largely forgotten.

Scientific and journalistic storytelling can be tools for justice and remembrance.

Creative narrative writing can revive untold voices in history.

Skills & Standards (CCSS & STEM Competencies)

Close Reading & Analysis: Identify Skloot's literary techniques in non-fiction (CCSS.ELA.RI.11-12.1)

Historical & Scientific Research: Analyze primary sources on Black medical history (CCSS.W.11-12.7)

Ethical Debate & Argumentation: Develop claims on medical ethics and Black health disparities (CCSS.W.11-12.1)

STEM Integration: Investigate biomedical research, HeLa cells, and historical medical data

Creative Narrative Writing: Reimagine historical moments using archival research (CCSS.W.11-12.3)

Stage 2 – Assessment Evidence

Performance Task: Hidden History Storytelling Project

 Conjuring the Voices of Black Philadelphia's Medical Past

Students will research Mercy Douglass Hospital and Black Philadelphians in medicine.

They will then create a historical narrative, giving voice to a fictional or real figure connected to Mercy Douglass Hospital, Henrietta Lacks, or similar medical histories.

This could take the form of:

A short story (historical fiction)

A creative first-person journal from a doctor, patient, or researcher

A digital media project (podcast, short documentary, blog post)

Other Assessments:

Historical Inquiry Research Paper on a Black medical pioneer from Philadelphia

Literary Analysis Essay on Skloot's storytelling and ethics

STEM-Infused Research: Analysis of HeLa Cells, bioethics, and their role in modern medicine

Socratic Seminar: Debating medical ethics and racial disparities in healthcare

Stage 3 – Learning Plan

Week 1: Introducing Henrietta Lacks & Black Philadelphia's Hidden Medical Histories

 Day 1: The Power of Medical Narratives

Engage: Students analyze a current medical ethics issue (e.g., COVID-19 vaccine research, CRISPR).

Discussion: What makes a medical story worthy of being told? Why are some voices erased?

 Day 2-3: Close Reading of Skloot's Prologue & Chapters 1-2

Mini-lesson: How does Skloot balance science and storytelling?

Activity: Identify bias, power structures, and ethical dilemmas in early chapters.

 Day 4-5: Exploring Mercy Douglass Hospital's Legacy

Historical Research: Students analyze primary sources (photos, newspaper articles, interviews).

Guest Speaker Option: A local historian or medical professional (if available).

Week 2: Researching Hidden Histories & Medical Ethics

 Day 6-7: Investigating HeLa Cells & Black Medical History

STEM Focus: What are HeLa cells, and why are they still used in medicine today?

Activity: Students research other Black patients or professionals who impacted science.

 Day 8-9: Hidden Figures of Mercy Douglass & Beyond

Jigsaw Activity: Small groups research Black medical pioneers like:

Dr. Nathan Mossell (Founder of Mercy Hospital)

Dr. Helen Octavia Dickens (Philadelphia's first Black female OB-GYN)

The Black nurses, midwives, and doctors who shaped public health

 Day 10: Storytelling & Ethical Debates

Seminar: What responsibilities do scientists, doctors, and journalists have in telling these stories?

Writing Workshop: Students outline their Hidden History Storytelling Project.

Week 3-4: Writing the Voices of the Past

 Creative Writing Workshops (Day 11-14)

Students draft, workshop, and revise their creative projects.

 Presentations & Reflection (Day 15-16)

Students present their projects through readings, performances, or digital media.

Final Reflection:

How did this project reshape your understanding of medical history?

What do we owe to Henrietta Lacks and Black medical pioneers?

Extension Opportunities:

- 📜 Collaboration with a local archive or museum (e.g., College of Physicians of Philadelphia, Penn Museum)
- 🎙️ Podcast Interviews: Students can interview local historians or medical professionals.
- 🌐 Community Impact: Partner with historical societies or STEM organizations for public exhibits.

Final Thoughts

This unit allows students to blend English Language Arts with STEM research and social justice, fostering critical thinking, historical inquiry, and ethical debate. By engaging with Philadelphia's hidden medical history, students will conjure the voices of the past and make connections between history, science, and storytelling.

Title: Exploring Medical Ethics and Black Philadelphia's Hidden Histories

Grade Level: 11th Grade Honors English Language Arts

Unit Duration: 4-5 Weeks

Core Text: The Immortal Life of Henrietta Lacks by Rebecca Skloot

Stage 1 – Desired Results

Big Ideas:

The complex relationship between medical research and ethics, especially concerning marginalized communities.

The significant yet often overlooked contributions of Black medical professionals and institutions in Philadelphia.

The power of narrative in uncovering and honoring hidden histories.

Essential Questions:

How have historical medical practices impacted Black communities?

What roles did institutions like Mercy-Douglass Hospital play in advancing healthcare for Black Philadelphians?

How can storytelling serve as a tool for social justice and historical recognition?

Learning Objectives:

Students will:

Analyze the ethical implications presented in The Immortal Life of Henrietta Lacks.

Research and present on Black medical institutions and professionals in Philadelphia, such as Mercy-Douglass Hospital.

Develop narratives that give voice to historical figures or events, emphasizing the importance of these contributions.

Stage 2 – Assessment Evidence

Performance Tasks:

Research Presentation: Students will work in groups to research Black medical institutions in Philadelphia, focusing on their history, challenges, and contributions. They will present their findings, highlighting key figures and events.

Creative Narrative Project: Individually, students will craft a narrative (e.g., a diary entry, short story, or monologue) from the perspective of a historical figure associated with their research, emphasizing the ethical and societal challenges they faced.

Other Assessments:

Reflective journals documenting insights from the readings and research.

Class discussions and Socratic seminars evaluating ethical issues in medical history.

Quizzes on key concepts from the core text and supplementary materials.

Stage 3 – Learning Plan

Week 1: Introduction to Medical Ethics and Henrietta Lacks

Day 1: Introduce the unit's themes and essential questions. Begin reading *The Immortal Life of Henrietta Lacks*, focusing on the ethical issues presented.

Day 2: Discuss the concept of informed consent and its historical context.

Day 3: Analyze the impact of HeLa cells on modern medicine.

Day 4: Introduce the research project on Black medical institutions in Philadelphia.

Day 5: Assign groups and begin preliminary research.

Week 2: Researching Black Medical History in Philadelphia

Days 6-7: Students conduct in-depth research on institutions like Mercy-Douglass Hospital, utilizing resources such as *The Rise and Decline of African-American Hospitals in Philadelphia* and *The Story of Mercy-Douglass Hospital*.

Day 8: Workshop on effective presentation skills.

Day 9: Groups finalize their presentations.

Day 10: Group presentations and peer feedback.

Week 3: Crafting Narratives from Historical Perspectives

Day 11: Introduce the creative narrative project, discussing examples of historical fiction and the importance of perspective.

Days 12-13: Writing workshops focusing on character development and historical accuracy.

Day 14: Peer review sessions to provide constructive feedback.

Day 15: Final revisions and submission of narratives.

Week 4: Connecting Past and Present

Day 16: Reflective discussion on the relevance of historical medical ethics today.

Day 17: Explore contemporary issues in medical ethics, drawing parallels to historical cases.

Day 18: Guest speaker session with a local historian or medical professional (if available).

Day 19: Socratic seminar evaluating the role of storytelling in social justice.

Day 20: Unit wrap-up and student reflections.

This plan offers students a multidisciplinary approach, combining literary analysis, historical research, and ethical inquiry. By delving into both *The Immortal Life of Henrietta Lacks* and the rich medical history of Black Philadelphians, students will gain a deeper appreciation for the complexities of medical ethics and the power of storytelling in uncovering hidden histories.

AI-Enhanced Learning Plan: Bringing Mercy Douglass Hospital Heroes to Life

Final Student Products:

AI-Generated Historical Personas & Storytelling – Students create AI-assisted "historical personas" of Black medical professionals from Philadelphia's past.

 Podcast: "Echoes of Mercy" – A student-led podcast featuring AI-generated historical figures in interviews or dramatized scenes.

📍 **Outdoor Gallery: "Philly's Mercy Douglass Hospital Heroes" – A public exhibit with human-sized posters of these figures, featuring QR codes linked to research and podcast episodes.**

📍 Step 1: AI-Powered Personas – Bringing the Past to Life

📍 Objective: Students will use AI tools to conjure digital versions of Mercy Douglass Hospital figures, enabling immersive storytelling.

Activity: AI Persona Development

Research: Students select a historical figure (doctor, nurse, patient, or administrator) linked to Mercy Douglass Hospital.

AI-Powered Biography: Using ChatGPT or another AI tool, students create a realistic first-person narrative from that person's perspective.

Voice AI (Optional): Use text-to-speech AI to create an audio version of their persona.

📍 Example AI Persona Output:

"My name is Dr. Nathan Mossell, and I was the first Black doctor to graduate from Penn's medical school. In 1895, I founded Mercy Hospital because Black Philadelphians deserved care free from racial discrimination. But few know the struggles we faced—how we fought to keep our doors open and trained a new generation of Black doctors against all odds..."

📍 Step 2: "Echoes of Mercy" – AI-Powered Podcast

📍 Objective: Students produce a podcast where they interview AI-generated historical figures, creating an engaging and educational listening experience.

Podcast Episodes Can Include:

- ◆ AI-Generated Interviews: Students write and record an imaginary interview with Mercy Douglass figures (AI-generated answers).
- ◆ Dramatic Reenactments: Students act out historical moments with sound effects and AI narration.
- ◆ Modern Connections: Compare Mercy Douglass's history to racial disparities in healthcare today.

📍 Tech Needed:

📍 Free podcast tools: Anchor, GarageBand, Audacity

📍 AI-generated voices: ElevenLabs, Descript Overdub

📍 Example Podcast Episode Idea:

🎧 Title: "A Conversation with Dr. Helen Dickens"

Students create an episode where they "interview" Dr. Helen Dickens, a pioneering Black female OB-GYN in Philadelphia, discussing her fight for Black maternal health.

🎨 Step 3: "Philly's Mercy Douglass Hospital Heroes" Outdoor Gallery

📌 Objective: Students design life-sized posters of Mercy Douglass Hospital figures, incorporating AI-generated visuals and QR codes linking to their research and podcast.

What's on the Posters?

- ✓ Portraits: AI-generated historically inspired images of the figures
- ✓ First-Person Storytelling: Brief bio in the person's "voice"
- ✓ QR Codes: Link to student research or podcast episodes
- ✓ Artwork & Maps: Historical images blended with AI-created art

📌 Tools for Art & Posters:

- 🎨 AI-generated visuals: DALL·E, Deep Dream Generator, Runway ML
- 🖼️ Poster design: Canva, Adobe Express, Figma
- QR codes: QR Code Generator

📌 Example Outdoor Gallery Poster (Dr. Nathan Mossell)

🖼️ Large AI-Generated Image of Dr. Mossell in early 1900s attire

📜 "I am Dr. Nathan Mossell..." (AI-generated bio)

QR Code to Podcast Episode on his impact on Philadelphia healthcare

📍 Community Impact: Outdoor Exhibit Display Ideas

✓ School Courtyard or Hallway Installation

✓ Local Library or Historical Society Collaboration

✓ Partnership with Black Philadelphia Cultural Institutions

📝 Final Reflection: Bridging History, AI, and Social Justice

📌 Wrap-Up Assignment:

After the gallery and podcast launch, students write a reflection essay or record a final podcast discussing:

What they learned about Black medical history in Philadelphia

How AI helped bring these stories to life

Why storytelling is key in preserving hidden histories

- 📌 Bonus Public Showcase Opportunity:
- ✓ Host a school-wide gallery walk and listening event
- ✓ Partner with Philadelphia museums or cultural centers to showcase the work

Why This Approach Works

- 🚀 Authentic Learning – Students become historians, researchers, artists, and podcasters.
- 🎭 Immersive Storytelling – AI personas make history personal and engaging.
- 🌐 Community Engagement – The outdoor gallery connects school & city history.
- 📱 Multimodal Expression – Students use AI, audio, and art for storytelling.

🔧 Resources & Templates for AI Personas, Podcast Scripts, and Poster Designs
Below are ready-to-use templates to help students develop AI-generated personas, craft podcast episodes, and design their Mercy Douglass Hospital Heroes gallery posters.

🎭 **Template 1: AI-Generated Persona Development**

📌 Objective: Students will create an AI-generated persona for a historical figure connected to Mercy Douglass Hospital.

Step 1: Research the Historical Figure

Who was this person? (Doctor, nurse, patient, administrator, etc.)

What was their contribution to Black healthcare?

What challenges did they face?

What would they want future generations to know?

Step 2: AI Persona Prompt Template

Students can input this into an AI tool (like ChatGPT) to generate a first-person narrative from their historical figure's perspective:

📜 AI Prompt:

"You are [Name], a Black medical professional or patient at Mercy Douglass Hospital in Philadelphia during [Time Period]. In a first-person narrative, tell your life story. Describe your work, challenges you faced, and the impact you made. Use historically accurate details and emotional depth to bring your voice to life."

📌 Example Output (Dr. Helen Dickens - First Black Woman OB-GYN in Philly)
"I am Dr. Helen Octavia Dickens, and I dedicated my life to ensuring Black mothers in Philadelphia received proper care. At Mercy Douglass, I saw firsthand how racism in medicine robbed women of dignity. But we resisted. We fought for them. We fought for ourselves. And because of that fight, Black women today stand on our shoulders..."

🎙️ Template 2: Podcast Script – "Echoes of Mercy"

📌 Objective: Students will create a scripted podcast episode featuring AI-generated interviews or historical reenactments.

Podcast Episode Format

- 🎙️ Title: [Name of Historical Figure] – A Voice from Mercy Douglass
- 🎙️ Host: [Student Name]
- 🎙️ Featured AI-Generated Persona: [Dr. Helen Dickens, Dr. Nathan Mossell, etc.]

📌 Podcast Opening (Example)

🎙️ Host: "Welcome to Echoes of Mercy, where we uncover the hidden voices of Black medical pioneers. Today, we travel back to early 20th-century Philadelphia to hear from a trailblazer—Dr. Helen Dickens, a Black OB-GYN who fought to improve Black maternal health at Mercy Douglass Hospital. Dr. Dickens, can you tell us about your journey?"

📌 AI-Generated Persona Response (Example)

🎙️ Dr. Helen Dickens: "Certainly. I was one of the first Black women to earn a medical degree in Pennsylvania. But my real challenge began when I saw how Black women were neglected in hospitals. So, I made it my mission to change that. At Mercy Douglass, we built a legacy that ensured Black mothers received the care they deserved..."

📌 Podcast Closing

🎙️ Host: "Dr. Dickens' work laid the foundation for Black maternal healthcare reform. What can we learn from her story today? Let's continue to honor these hidden heroes of Philadelphia's medical past."

📌 Podcast Production Tools:

🎙️ Anchor.fm (Free podcast hosting)

- 🎙️ GarageBand (Mac users) or Audacity (Windows users)
- 🎙️ Descript Overdub (AI-generated voices for personas)

- 🎨 Template 3: Poster Design – "Philly's Mercy Douglass Hospital Heroes"
- 📌 Objective: Students will design life-sized posters featuring AI-generated visuals, historical bios, and QR codes linking to their podcast research.

Poster Elements:

- ✓ AI-Generated Portrait of the historical figure (DALL·E, Deep Dream Generator)
- ✓ "In Their Voice" Bio (From AI persona project)
- ✓ QR Code linking to podcast episode or research
- ✓ Historical Images blended with student-created artwork
- ✓ Engaging Quote from the person

- 📌 Example Layout for Dr. Helen Dickens' Poster:

💻 Top Section:

 **AI-Generated Portrait of Dr. Dickens**

📜 Middle Section:

"I fought for Black women to have safe births when no one else would. Mercy Douglass Hospital was our sanctuary, our fight, our legacy." – Dr. Helen Dickens

📚 Bottom Section:

 QR Code: Scan to listen to Dr. Dickens' story on the "Echoes of Mercy" Podcast!

 Historical Photos: Image of Mercy Douglass Hospital, medical teams

- 📌 Tools for Designing Posters:

-  Canva (Easy drag-and-drop poster maker)
-  Adobe Express (For high-quality digital graphics)
-  Figma (For collaborative poster design)

- 🚀 Bonus: Outdoor Gallery Launch Plan

 Goal: Transform school hallways, courtyards, or community spaces into a public art exhibit celebrating Black medical pioneers.

Event Planning Checklist:

- ✓ Set Up Posters Outdoors (Courtyard, school entrance, library, or local museum partnership)
- ✓ Launch Podcast Listening Stations (Tablets/headphones with QR codes)
- ✓ Invite Local Historians or Medical Professionals (Discuss Mercy Douglass Hospital's legacy)
- ✓ Interactive Activity: Visitors write "What does Black medical history mean to you?" on a message wall.

- 📌 Community Partnerships (Ideas for Collaboration):
 - 🏛️ Historical Societies (e.g., The African American Museum in Philadelphia)
 - 🏥 Local Hospitals (Host event at a healthcare institution)
 - 🎓 University Medical Departments (Connect with medical history scholars)

🕒 Wrapping Up: Bringing AI, Art, and Storytelling Together

This project will empower students to:

- ✓ Use AI to resurrect hidden voices in history
- ✓ Bridge literature and STEM through podcasting & research
- ✓ Create a public-facing exhibit celebrating Black Philadelphia's medical pioneers

UbD Unit Plan that integrates The Immortal Life of Henrietta Lacks with scientific discovery (lab experiments with eCLOSE Institute), genealogy research, and the history of Mercy Douglass Hospital.

This plan will allow students to explore biotechnology, bioethics, Black medical history, and family ancestry while engaging in hands-on lab experiments, historical research, and storytelling.

🔬 Unit Title: Science, Genealogy & Mercy Douglass: Tracing the Past, Exploring the Future

Honors 11th Grade English Language Arts & Science Collaboration

Unit Duration: 5-6 Weeks

Core Text: The Immortal Life of Henrietta Lacks by Rebecca Skloot

Collaborator: eCLOSE Institute (for scientific experiments)

Stage 1 – Desired Results

Big Ideas:

Scientific Discoveries & Ethics – How biotechnology has advanced through Henrietta Lacks' HeLa cells and what ethical dilemmas it raises.

Genealogy & Identity – Understanding how ancestry research can reclaim lost or hidden family histories.

Black Medical History & Mercy Douglass Hospital – The role of Black healthcare institutions in Philadelphia and their impact on racial equity in medicine.

Connecting the Past & Present – How historical events, scientific breakthroughs, and personal genealogy shape our understanding of medical justice.

Essential Questions:

What are the ethical dilemmas in scientific discoveries using human cells?

How does understanding genealogy empower communities and individuals?

Why was Mercy Douglass Hospital significant in Black healthcare history?

How has Henrietta Lacks' story changed the conversation around medical ethics, consent, and race in science?

What impact do historical medical institutions and biotechnology research have on current healthcare disparities?

Learning Objectives:

Students will:

Analyze literary themes in The Immortal Life of Henrietta Lacks, focusing on ethics, race, and medical history.

Conduct hands-on scientific research with eCLOSE Institute, making real-world biomedical connections.

Trace ancestry and historical records to understand genealogy and the personal impact of lost medical histories.

Research Black medical pioneers and the impact of Mercy Douglass Hospital on healthcare equity.

Develop a culminating project connecting scientific discovery, genealogy, and historical storytelling.

Stage 2 – Assessment Evidence

Performance Tasks:

 Lab-Based Science Discovery (with eCLOSE Institute):

Students conduct biotechnology lab experiments connected to HeLa cells, DNA extraction, or medical research ethics.

Possible experiments: Genomic analysis, DNA extraction, studying HeLa cell impact on research.

 Genealogy & Medical History Research:

Students trace their own family ancestry (if comfortable) or research African American genealogy, lost medical histories, and Mercy Douglass Hospital archives.

Use genealogy databases (Ancestry.com, FamilySearch, AfriGeneas) and historical resources.

 Creative Project – "If These Cells Could Speak":

Students create a biographical narrative (written, digital, or performance-based) of a historical figure from Mercy Douglass Hospital or a lost family ancestor connected to medical history.

Options: Monologue, short film, digital storytelling, AI-generated persona interviews.

 "Legacy of HeLa & Mercy Douglass" Outdoor Gallery Exhibit:

Final public-facing exhibit featuring lab discoveries, genealogy projects, and Mercy Douglass research.

Can include AI-generated art, archival documents, student reflections, and interactive digital media.

Other Assessments:

- Socratic Seminars & Discussions – Ethical debates on medical consent, race, and science.
- Literary Analysis Essay – How does Skloot use narrative nonfiction to shape our understanding of HeLa?
- Reflection Journal – How does science, history, and personal ancestry intersect?

Stage 3 – Learning Plan

Week 1: Introduction to Science & Hidden Histories

 Day 1:

Introduction to Henrietta Lacks & Unit Themes

Pre-Reading Activity: What do students know about biotechnology, ethics, and race in medicine?

 Day 2-3:

Hands-on Science Lab with eCLOSE Institute – Students begin DNA extraction experiments.

 Day 4:

Exploring Mercy Douglass Hospital: Students examine archival photos, news articles, and oral histories of Black medical pioneers in Philadelphia.

 Day 5:

Introduction to Genealogy Research – Students learn to use genealogy tools to explore family and community histories.

Week 2: Scientific Inquiry, Ethics, and Storytelling

 Day 6-7:

Close Reading & Discussion of The Immortal Life of Henrietta Lacks
Focus on Medical Ethics & Race in Science

 Day 8-9:

eCLOSE Institute Lab Work – Scientific Discoveries in Biotechnology
HeLa Cells: Why do they matter in medical history?

 Day 10:

Genealogy Research & Storytelling Workshop

Students begin outlining family history OR Mercy Douglass research projects.

Week 3: Merging Science, History, and Genealogy

 Day 11-12:

Analyzing Rebecca Skloot's Research Process – How does investigative storytelling connect science and history?

 Day 13-14:

Final Lab Experiments & Data Collection with eCLOSE Institute
Students apply scientific findings to real-world ethical debates.

 Day 15:

Students finalize genealogy research and historical deep dives.

Week 4: Creating the "If These Cells Could Speak" Project

 Day 16-17:

Creative Narrative Writing & AI Personas – Students generate a first-person account from a historical figure or ancestor.



Day 18:

Optional Podcast or AI-Generated Interview Recordings – Students bring historical voices to life.



Day 19:

Poster & Digital Exhibit Design for Outdoor Gallery – Students prepare final public showcase.

Week 5: Public Exhibit & Final Reflection



Final Event: "Legacy of HeLa & Mercy Douglass" Outdoor Gallery Exhibit

Students showcase their lab discoveries, genealogy research, and creative storytelling through:

- Posters with AI-generated art & QR-coded digital stories.
- Podcast episodes featuring AI-generated historical voices.
- Genealogy research findings mapped into personal histories.
- Final Discussion: What does it mean to reclaim hidden histories in science, medicine, and our own families?



Final Thoughts & Next Steps
This unit blends biotechnology, bioethics, genealogy, and Black medical history, allowing students to engage in scientific research, uncover lost histories, and tell powerful personal stories.

Would you like:

- Lesson plans with specific student prompts?
- Templates for genealogy research & lab reflections?
- Examples of AI personas & storytelling frameworks?



Let's refine and elevate this even more!



Unit Title: Science, Genealogy & Mercy Douglass: Tracing the Past, Exploring the Future

Honors 11th Grade English Language Arts & Science Collaboration

Unit Duration: 5-6 Weeks

Core Text: *The Immortal Life of Henrietta Lacks* by Rebecca Skloot

Collaborator: eCLOSE Institute (for scientific experiments)

Stage 1 – Desired Results

Big Ideas:

- **Scientific Discoveries & Ethics** – How biotechnology has advanced through Henrietta Lacks' HeLa cells and what ethical dilemmas it raises.
- **Genealogy & Identity** – Understanding how ancestry research can reclaim lost or hidden family histories.
- **Black Medical History & Mercy Douglass Hospital** – The role of Black healthcare institutions in Philadelphia and their impact on racial equity in medicine.
- **Connecting the Past & Present** – How historical events, scientific breakthroughs, and personal genealogy shape our understanding of medical justice.

Essential Questions:

1. What are the ethical dilemmas in scientific discoveries using human cells?
2. How does understanding genealogy empower communities and individuals?
3. Why was Mercy Douglass Hospital significant in Black healthcare history?
4. How has Henrietta Lacks' story changed the conversation around **medical ethics, consent, and race in science?**

5. What impact do **historical medical institutions and biotechnology research** have on current healthcare disparities?

Learning Objectives:

Students will:

- **Analyze literary themes** in *The Immortal Life of Henrietta Lacks*, focusing on ethics, race, and medical history.
- **Conduct hands-on scientific research** with eCLOSE Institute, making real-world biomedical connections.
- **Trace ancestry and historical records** to understand genealogy and the personal impact of lost medical histories.
- **Research Black medical pioneers** and the **impact of Mercy Douglass Hospital on healthcare equity**.
- **Develop a culminating project** connecting **scientific discovery, genealogy, and historical storytelling**.

Stage 2 – Assessment Evidence

Performance Tasks:

1.  **Lab-Based Science Discovery (with eCLOSE Institute):**
 - Students conduct **biotechnology lab experiments** connected to **HeLa cells, DNA extraction, or medical research ethics**.
 - Possible experiments: **Genomic analysis, DNA extraction, studying HeLa cell impact on research**.
2.  **Genealogy & Medical History Research:**
 - Students **trace their own family ancestry** (if comfortable) or **research African American genealogy, lost medical histories, and Mercy Douglass Hospital archives**.
 - Use **genealogy databases (Ancestry.com, FamilySearch, AfriGeneas)** and historical resources.
3.  **Creative Project – "If These Cells Could Speak":**
 - Students create a **biographical narrative** (written, digital, or performance-based) of a **historical figure from Mercy**

Douglass Hospital or a lost family ancestor connected to medical history.

- Options: **Monologue, short film, digital storytelling, AI-generated persona interviews.**

4.  **"Legacy of HeLa & Mercy Douglass" Outdoor Gallery Exhibit:**

- Final **public-facing exhibit featuring lab discoveries, genealogy projects, and Mercy Douglass research.**
- Can include **AI-generated art, archival documents, student reflections, and interactive digital media.**

Other Assessments:

-  **Socratic Seminars & Discussions** – Ethical debates on medical consent, race, and science.
-  **Literary Analysis Essay** – How does Skloot use **narrative nonfiction to shape our understanding of HeLa?**
-  **Reflection Journal** – How does science, history, and personal ancestry intersect?

Stage 3 – Learning Plan

Week 1: Introduction to Science & Hidden Histories

Day 1:

- **Introduction to Henrietta Lacks & Unit Themes**
- **Pre-Reading Activity:** What do students know about biotechnology, ethics, and race in medicine?

Day 2-3:

- **Hands-on Science Lab with eCLOSE Institute** – Students begin **DNA extraction experiments.**

Day 4:

- **Exploring Mercy Douglass Hospital:** Students examine **archival photos, news articles, and oral histories** of Black medical pioneers in Philadelphia.

 **Day 5:**

- **Introduction to Genealogy Research** – Students learn to use **genealogy tools** to explore family and community histories.

Week 2: Scientific Inquiry, Ethics, and Storytelling

 **Day 6-7:**

- **Close Reading & Discussion** of *The Immortal Life of Henrietta Lacks*
- **Focus on Medical Ethics & Race in Science**

 **Day 8-9:**

- **eCLOSE Institute Lab Work – Scientific Discoveries in Biotechnology**
- **HeLa Cells: Why do they matter in medical history?**

 **Day 10:**

- **Genealogy Research & Storytelling Workshop**
- **Students begin outlining family history OR Mercy Douglass research projects.**

Week 3: Merging Science, History, and Genealogy

 **Day 11-12:**

- **Analyzing Rebecca Skloot's Research Process** – How does **investigative storytelling** connect science and history?

 **Day 13-14:**

- **Final Lab Experiments & Data Collection with eCLOSE Institute**

- Students apply scientific findings to real-world ethical debates.

 **Day 15:**

- Students finalize genealogy research and historical deep dives.

Week 4: Creating the "If These Cells Could Speak" Project

 **Day 16-17:**

- **Creative Narrative Writing & AI Personas** – Students generate a **first-person account** from a historical figure or ancestor.

 **Day 18:**

- **Optional Podcast or AI-Generated Interview Recordings** – Students bring historical voices to life.

 **Day 19:**

- **Poster & Digital Exhibit Design for Outdoor Gallery** – Students prepare final public showcase.

Week 5: Public Exhibit & Final Reflection

 **Final Event: "Legacy of HeLa & Mercy Douglass" Outdoor Gallery Exhibit**

- Students showcase their **lab discoveries, genealogy research, and creative storytelling** through:
 - ✓ Posters with AI-generated art & QR-coded digital stories.
 - ✓ Podcast episodes featuring AI-generated historical voices.
 - ✓ Genealogy research findings mapped into personal histories.

 **Final Discussion:** What does it mean to reclaim hidden histories in science, medicine, and our own families?

Science, Genealogy & Mercy Douglass: Special Education Modifications

Unit Overview

Grade Level: 11th Grade Special Education English & Science Collaboration

Duration: 6-7 Weeks

Core Text: *The Immortal Life of Henrietta Lacks* by Rebecca Skloot

Collaborators: eCLOSE Institute (Science Experiments)

Project Components (Modified):

- Scientific discoveries (lab experiments with guided support)
- Genealogy research with step-by-step scaffolding
- Mercy Douglass Hospital history with visual and audio supports
- AI-generated historical personas with sentence stems
- Podcast & creative storytelling using visual scripts and templates
- Outdoor gallery exhibit with simplified poster creation

** Daily Lesson Plans with Modifications**

Week 1: Introduction to Science & Hidden Histories

Day 1: Unit Introduction & Themes

- Use **visual aids** and **simplified text** to introduce Henrietta Lacks, HeLa cells, and bioethics.

- **Essential questions:** *Who owns our cells? Why does this matter to us?*

- **Modification:** Provide **word banks and sentence starters** for discussions.

Day 2: Pre-Reading & Small Group Discussion

- Read **an abridged version** of Skloot's prologue or use an **audiobook**.

- **Modification:** Offer **graphic organizers** for comprehension.

Day 3: Bioethics & DNA Basics (Hands-on Activity)

- **Simplified ethics discussion** using real-life examples.

- **Modification:** **Hands-on vocabulary cards** to define key terms.

Day 4: Mercy Douglass Hospital – Exploring Black Medical History

- Use **pictures, videos, and short articles** for historical context.
- **Modification:** Provide **fill-in-the-blank worksheets** instead of long reading passages.

Day 5: Introduction to Genealogy Research

- Provide a **structured research template** with checklists.
- **Modification:** Offer **a guided step-by-step genealogy lesson** using a **graphic organizer**.

Week 2: Scientific Inquiry & Genealogy Research

Day 6-7: DNA Extraction Lab (eCLOSE Institute – Guided Experiment)

- **Modification:** Provide **visual lab instructions** and pair students with **peer mentors**.

- Use **sentence stems** to help students explain findings.

Day 8-9: Close Reading & Ethical Debate (Simplified)

- Use a **modified text version** of *The Immortal Life of Henrietta Lacks*.
- **Modification:** Assign **small discussion groups** with teacher-facilitated questions.

Day 10: Genealogy Research & Oral Histories (Structured Support)

- Offer **pre-filled ancestry templates** for students to complete with minimal writing.
- **Modification:** Allow **students to record voice notes** instead of writing full responses.

Week 3: AI Personas & Storytelling (Scaffolded Writing)

Day 11-12: Creating AI-Generated Historical Personas

- Use **guided AI prompts with sentence starters**.
- **Modification:** Provide an **example persona** before students create their own**.

Day 13-14: Podcast Writing & Storyboarding (Visual & Audio Support)

- **Modification:** Use **podcast script templates with visuals**.

- **Provide a peer recording partner** for students who struggle with reading aloud.

Day 15: Storytelling & Presentation Prep

- Students refine narratives using **a checklist and peer feedback**.
- **Modification:** Allow **audio or digital storytelling as an alternative to writing**.

Week 4: Merging Science, History, & Identity (Scaffolded Creation)

Day 16-17: Finalizing Genealogy & Mercy Douglass Research

- **Modification:** Offer **pre-designed poster templates** instead of starting from scratch.

- Use **sentence starters** to guide reflection writing.

Day 18-19: Creating the Outdoor Gallery & Podcast Finalization

- **Modification:** Assign **specific poster sections** so each student focuses on a manageable task.

Day 20: Public Presentation & Reflection

- Allow multiple **presentation formats (spoken, recorded, or paired reading)**.
- **Modification:** Provide a **simple reflection worksheet** with sentence frames.

📝 Modified Templates & Resources

📝 Modified Genealogy Research Template

- **Name:** _____
- **Birth & Death Dates (if known):** _____
- **Connection to Medicine:** (Check one) Doctor Nurse Patient
- **What did they do?** (Short answer or dictate response)
- **What did you learn?** (Sentence starters provided)

🎭 AI Persona Creation with Sentence Starters

- **My name is** _____ and I worked at Mercy Douglass Hospital as a _____.
- **One challenge I faced was** _____.

- **My biggest impact was** _____.

* Simplified Podcast Script Template*

Title: _____

Host: _____

Featured AI-Generated Persona: _____

Opening:

Microphone icon "Welcome to our podcast about history and science! Today, we are learning about _____."

Question 1: "Can you tell us about your work at Mercy Douglass Hospital?"

Microphone icon "AI Persona: "I worked as a _____ and helped _____."

Closing:

Microphone icon "Thanks for listening! Join us next time to learn more!"

*  Outdoor Gallery Poster Template (Fill-in-the-Blank)*

- **Title:** _____

- **Picture of Historical Figure** (AI-generated or teacher-provided)

- **A short story about them:** "This person was important because _____."

- **QR Code to Podcast or More Info**

- **Student's Favorite Fact:** "I learned that _____."

*  Final Thoughts & Next Steps*

This **special education version** of the unit provides:

Hands-on, visual, and step-by-step scaffolding

Alternative assessments (audio responses, guided research, and sentence frames)

Built-in peer and teacher support for complex tasks
