

## V. Warren Science Lesson Plan Series

### Order of Lessons

1. AI Meets Medicine: A New Lens on the Cell Cycle
2. Cracking the Code: DNA Replication with AI Insights
3. When Cells Misbehave: Cancer Research with AI
4. Hacking the Cell Cycle with AI

### Instructional Considerations

#### Resources:

How AI is finding cancer treatments with fewer side-effects | BBC News  
<https://www.youtube.com/watch?v=FtdXAZ048hA&t=1s>

The Future of AI and Cancer Research  
<https://www.youtube.com/watch?v=fIODHxcipWo>

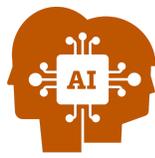
Artificial Intelligence (AI) and Cancer  
<https://www.cancer.gov/research/infrastructure/artificial-intelligence>

#### Extension Activity:

Small groups research one example of cell specialization (e.g., stem cells → neurons, muscle cells, or skin cells). They use AI to brainstorm environmental influences, then fact-check with reliable databases.

#### Differentiation & Accessibility:

- Provide sentence starters or graphic organizers for students who need support in planning or writing essays.
- Offer alternative formats for students with disabilities (e.g., speech-to-text for writing, screen readers, large-print materials).
- Allow students to choose between various dataset options for their data collection activities to increase engagement and ownership.



## Time Management:

- Keep a timer visible or set reminders (e.g., 5 min warning before wrap-up).
- Have a pre-annotated chart ready in case tech issues slow you down.
- Use a polling tool (Poll Everywhere, Mentimeter, Kahoot, etc.) for quick opinions if the discussion is limited.

## Equity & AI Ethics:

- Reinforce these themes clearly:
  - Data bias is often unintentional, caused by incomplete or skewed datasets.
  - Even small % differences can lead to big consequences (e.g., misidentification, unfair outcomes).
  - Tech decisions reflect human choices—what’s measured, who is represented, and what’s left out.
- Ask: “Whose voices are missing when we design AI?”
  - Encourage empathy-driven reflection: “If this system misunderstood you, how would that affect your life?”