WeTeach_AI

Hacking the Cell Cycle with AI

Grade Level: **9-12** | Duration: **Multi-Day** | Subject Area: **Science**

LESSON TABLE OF CONTENTS

This lesson was designed under the WeTeach_AI **Advancing AI Literacy Project**. The project supports the development of standards-aligned AI literacy lessons designed for teachers by teachers. Additional lesson plan material, such as rubrics, answer keys, activity guides, and instructional considerations can be found here on our website.

The contents of this digital lesson were developed by the Texas Advanced Computing Center (TACC) with the support of Google.org. However, the contents do not necessarily represent the policies of Google.

Lesson Author: Dr. Vashunda Warren, STEM Teacher and High School Principal

"Based in North East Texas, I am a STEM educator and leader with nearly 30 years of experience from early childhood to higher education. Passionate about equity and innovation, I design hands-on learning experiences that integrate emerging technologies and make STEM approachable for all. This AI literacy lesson was created to empower students and educators to confidently navigate and apply new technologies to expand access and opportunity in STEM."

Lesson Description

This lesson engages students in exploring the cell cycle, cell differentiation, and the consequences of disruptions such as cancer through direct instruction, collaborative learning, and AI-assisted activities. Students analyze how cells grow and specialize, and evaluate why errors in the cycle can lead to disease. By integrating digital tools, students also build skills in assessing the accuracy and reliability of AI-generated content. The lesson strengthens biological understanding while fostering digital literacy and critical thinking about AI.

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Lesson Objectives *(formatted as "Students will be able to..." statements)*
• Goal 1: • Goal 2: • Goal 3:
Essential Questions
Outline the basic details and purpose of the lesson here. Also, highlight if this is a face-to-face lesson or a digital lesson. A brief 2-3 sentence overview of the lesson focus and key takeaways.

TEKS Alignment (Texas Standards Alignment)	
• TEKS Code 1 – Description • TEKS Code 2 – Description • TEKS Code 3 – Description	• TEKS Code 1 – Description • TEKS Code 2 – Description • TEKS Code 3 – Description
CSTA/ISTE Alignment (National Standards Alignment)	
• Standard 1 – Description • Standard 2 – Description • Standard 3 – Description	• Standard 1 – Description • Standard 2 – Description • Standard 3 – Description

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Inclusive Computing Considerations

(based on Guiding Principles for Inclusive CS Teaching)

AI Literacy Competencies

(based on TeachAI Framework)

Key Terms	
Term	**Definition**
Example Term 1	Brief definition here
Example Term 2	Brief definition here
Example Term 3	Brief definition here
Example Term 4	Brief definition here
Example Term 5	Brief definition here

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Launch

Engaging activity or prompt to introduce the lesson.

[Information goes here]

Exploration

Step-by-step student tasks, experiments, or investigations.

[Information goes here]

Whole Class Discussion

Discussion questions, teacher prompts, and expected student responses.

[Information goes here]

Assessment

Formative or summative assessment tasks and criteria.n.

Assessment Opportunities	Facilitation Tips
Activity Title Outline the big picture goals here. How will you measure students' mastery of lesson objectives?	Outline general teacher actions that should occur during this activity.