

EngagementAl Integration Taskforce

2025 Virtual Teaching Hackathon

Team Names, Titles, Roles

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Problem Selection and Approach



Key Problem

How can we effectively and responsibly integrate AI into virtual STEM teaching to enhance learning, engagement, and equity?

Approach

- Explore and experiment with these AI tools:
 - ChatGPT
 - Brisk Teaching (Chrome/Edge extension)
 - MagicSchool Al
 - Photomath (uses AI for solving math problems)
 - Gemini (Al by Google; integrates with Google Classroom)
 - Khanmigo (Khan Academy's Al tutor)
 - SchoolAl (teacher-monitored Al tutor environment)

Strategies



Editing Images for Learning

Goal: Teach students and teachers how to use AI to edit images for educational purposes.

Use Cases:

Students: Create visuals for projects and digital portfolios

Teachers: Generate or modify assessment visuals

How to Edit an Image Using Al

- Steps for using AI image editing (e.g., ChatGPT):
 - 1. Upload Image: Click the image icon or paperclip.
 - 2. Provide Clear Instructions: E.g., "Replace the sky with a sunset."
 - 3. Generate Edit: Hit Enter and let AI process the request.
 - 4. Review and Refine: Request additional changes if needed.
 - **5.** Save the Image: Right-click and download.

SchoolAl Overview

- Individualized AI tutoring with teacher oversight:
 - Teachers choose topic; students interact individually with AI tutor
 - Teacher sees live chat data and emotional response indicators
 - Redirects off-topic conversations
 - Free for teachers

Implementation



#1 Start with the "Why" — Understanding Al

Help students grasp what AI is and why responsible use matters.

Key concepts:

- Fairness and bias
- Transparency
- Accountability
- Privacy and consent

Activities:

- Analyze real-world cases (e.g., biased facial recognition, AI in hiring)
- Role-play debate (e.g., "Should AI be used in schools?")

#2 Teaching AI Ethics and Digital Citizenship

Introduce ethical frameworks and real-world dilemmas.

Build foundational awareness:

- What is AI? (types, examples)
- How AI affects daily life (recommendations, chatbots)
- Benefits & risks (privacy, bias, misinformation)

Activities:

- Class discussion
- Watch short documentaries: Coded Bias, The Social Dilemma

#3 Hands-On With AI Tools

- Let students explore Al tools while emphasizing responsible use :
 - Teachable Machine (Google)
 - Scratch with AI extensions
 - ChatGPT or other LLMs (with guidance)
- Focus on:
 - How Al works
 - Data sources and limitations
 - Bias in outputs

#4 Co-Creating a Responsible Al Use Policy

- Involve students in writing classroom norms for Al use, including:
 - Acceptable use cases
 - Examples of misuse
 - Citing Al-generated content properly
- Guidelines for ethical use

#5 Project-Based Learning Ideas

- Let students apply knowledge creatively:
 - Analyze an AI tool for bias
 - Create a PSA about responsible AI use

#6 Recommended Curricula and Resources

- Consider using or adapting to existing curricula:
 - AI + Ethics Curriculum (MIT Media Lab)
 - Google's "Al for Anyone"
 - AI4K12 Initiative

Supporting Materials



Free Al Image Editing Tools

PhotoEditor.Al

Background removal, clean-up, enhancement

Magic Studio

Object removal, Al art tools

PicWish

Background removal, sharpening, enhancement

Assessment Example Using Image Al

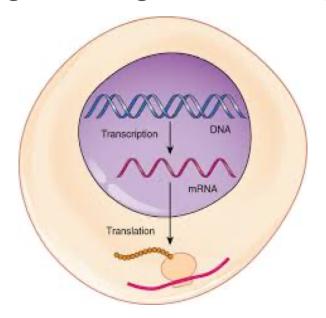
Scenario: A biology teacher uploads several cell process images.

Prompt: "Which image correctly demonstrates protein synthesis?"

Activity: Students analyze and justify their selections.

Assessment Example Using Image Al

Here is the original image that was uploaded to AI:



Assessment Example Using Image Al

Prompt: "Edit the image. The new image should show the red mRNA strand as a double-sided molecule, rather than single-sided."

