

# How to Use AI for and Asses

**Peter Shea**, Middlesex Community

**Devan Walton**, Northern Essex Cor

Wednesday, April 10th  
1:00 pm EST

## Commonly Used AI Tools

- ChatGPT 4.0 (with Dall-E)
- Claude.AI
- Midjourney (for image generation)
- Google Gemini

Enhance Understanding of AI Applications in Education

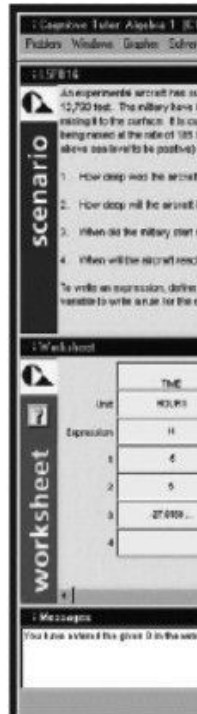
## AI Learning Design: Levels 1 & Le



## Enhance Understanding of AI Applications in Education

### *AI's History in Education*

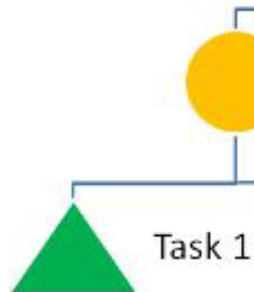
**AI applications  
have been in  
education for over  
30 years.**



## Enhance Understanding of AI Applications in Education

### *AI's History in Education*

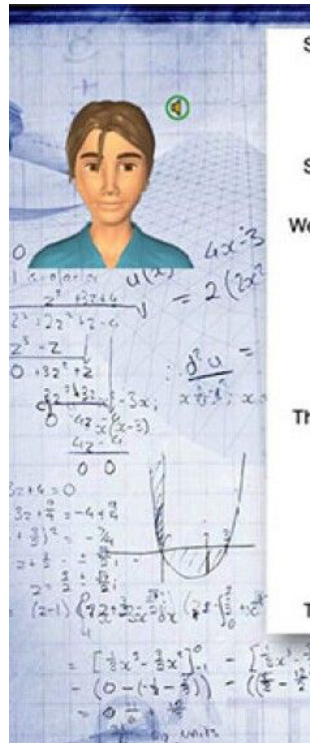
**Early applications required explicit rules for operation.**



Enhance Understanding of AI Applications in Education

## *AI's History in Education*

**These systems  
were rigid but  
reliable in  
producing answers**



Enhance Understanding of AI Applications in Education

## *AI's History in Education*

**The rigidity made them poor at supporting learner agency & motivation**



Enhance Understanding of AI Applications in Education

## *AI in Contemporary Education Context*

**Modern AI, like  
ChatGPT, are not  
built through  
explicit rules**



Welcome to C  
n your OpenAI a



Enhance Understanding of AI Applications in Education

## *AI in Contemporary Education Context*

**Modern AI identify  
their own  
connections  
between content.  
This process is  
opaque**



Enhance Understanding of AI Applications in Education

## *AI in Contemporary Education Context*

**This makes  
modern AI more  
flexible but also  
prone to errors**



241 - (-241) + 1



241 - (-241) + 1 is

241 - (-241) + 1 is



Enhance Understanding of AI Applications in Education

## *Current AI Applications*

**Let's focus on what  
this flexibility  
allows in  
education**



Enhance Understanding of AI Applications in Education

## *Current AI Applications*

**We can use Bing to  
create pictures**



## Enhance Understanding of AI Applications in Education

### *Current AI Applications*

**We can use  
ChatGPT to create  
diagrams**



**You**  
could you c  
themes

Consequences o

Social stratification

East Egg vs. West Egg

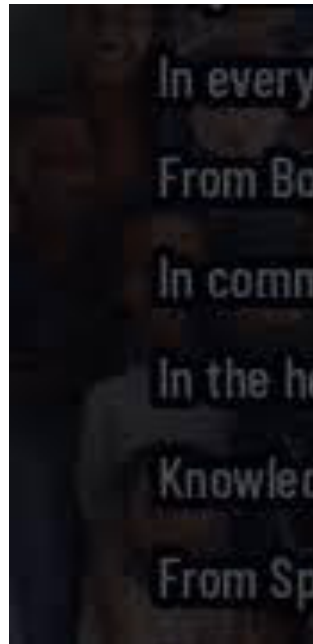
Tom and Myrtle's affair

Gats  
n

Enhance Understanding of AI Applications in Education

## *Current AI Applications*

**We can use Suno  
to create songs**



Enhance Understanding of AI Applications in Education

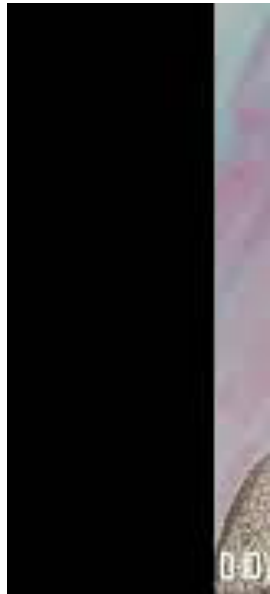
## *Current AI Applications*

**We can use  
ElevenLabs to  
create voice clones**

Enhance Understanding of AI Applications in Education

## *Current AI Applications*

**We can use Studio  
D-ID to create  
avatar clones**





Enhance Understanding of AI Applications in Education

## *Current AI Applications*

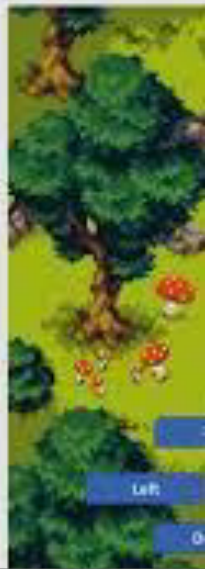
**We can use Adobe  
audio-to-animate  
to create  
animations**



Enhance Understanding of AI Applications in Education

## *Current AI Applications*

**Student example  
from last semester  
of using these  
tools together for  
a project**



Credit to Jon

## Thinking About Affordances

### *Remixing Content*



The screenshot shows the Claude AI interface. In the top right corner, the Claude logo (a red asterisk) and the word "Claude" are visible. On the left, a blue document icon with a white 'x' in a circle at the top left corner is labeled "(EC) Digital Prototype Activity" and "PDF". A large green arrow points from a dark green box on the right towards the document icon. The dark green box contains the text "Claude allows upload existing remixing" in white. Below the document icon, the text "I'd like you to use the structure of the attached generate a new activity on Calculating Logarithm" is visible. At the bottom left, "Claude 3 Opus" is shown with a downward arrow.

Claude

Claude allows upload existing remixing

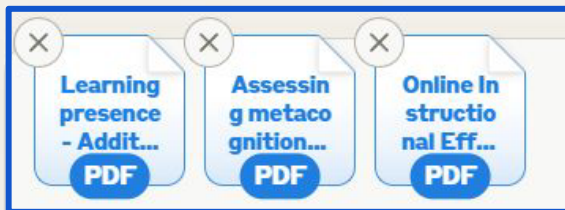
(EC) Digital Prototype Activity  
PDF

I'd like you to use the structure of the attached generate a new activity on Calculating Logarithm

Claude 3 Opus ▾

## Thinking About Affordances

### *Constructing New Content*



Take these three journal articles and create a module on their related topics that would be an introductory college-level course. The basic

- Introduction
- Learning Objectives
- Core Content
- Real World Connection
- 3 Multiple Choice Questions (Mark correct)

Claude 3 Opus ▾


## Thinking About Affordances

### *Constructing Cited Content*

Can you provide content for a 20-slide presentation of the Haitian Revolution. **The content must h**

Each slide should have the format of:

- Slide Title
- Suggested Image Content
- Slide Content with Citation (2-3 sentences, r**

Claude 3 Opus 

## Thinking About Affordances

# Constructing Cited Content



### AI Tools:

Strategic Planner

Feedback Maker

Lowell Culture

Bedford Culture

In-class Project

Syllabus Checker

Student Belonging

Alt-text Maker

Math LaTeX

Quiz Maker

Slide Planner

Letter of R. Maker

OER Maker

What topic would you like to create OER for?

The Louisiana Purchase

Submit



## Thinking About Affordances

### *Constructing Interactive Content*

Construct the logic for a branching interaction that allows the learner to practice basic chemical kinematics. We are using Google Forms to implement the interaction through sectioned multiple choice questions. Provide content for the questions and the choices.

Claude 3 Opus 

## Thinking About Affordances

# Constructing Interactive Content

Title: The Mystery of the Rusty Ruins

Introduction:

You are a young archaeologist exploring an ancient, abandoned city. As you inventory the ruins, you notice that many of the metal structures have rusted at an unusually high rate. You decide to use your knowledge of chemical kinetics to solve the mystery behind the accelerated rusting process.

Section 1: Reaction Rates

You begin by examining the factors that could have affected the reaction rate of the rusting process.

Question 1: Which of the following factors most likely contributed to the rapid rusting of the metal structures?

- Choice A: The presence of moisture in the air
- Choice B: The high temperature of the environment
- Choice C: The large surface area of the metal structures

Correct answer: C (leads to Section 2)

Explanation for A and B: While moisture and temperature can affect reaction rates, the large surface area of the metal structures is the most significant factor in this case. A large surface area allows for more contact between the reactants, increasing the reaction rate.

Section 2: Rate Laws

With the surface area identified as a key factor, you now investigate the rate laws governing the rusting process.



## Thinking About Affordances

# Constructing Interactive Content

Title: The Mystery of the Rusty Ruins

Introduction:

You are a young archaeologist exploring an ancient, abandoned city. As you investigate the ruins, you notice that many of the metal structures have rusted at an unusually rapid rate. You decide to use your knowledge of chemistry to investigate the mystery behind the accelerated rusting.

Section 1: Reaction Rates

You begin by examining the factors that could have affected the reaction rate of the rusting process.

Question 1: Which of the following factors most likely contributed to the rapid rusting of the metal structures?

- Choice A: The presence of moisture in the air
- Choice B: The high temperature of the environment
- Choice C: The large surface area of the metal structures

Correct answer: C (leads to Section 2)

Explanation for A and B: While moisture and temperature can affect reaction rates, the large surface area of the metal structures is the most significant factor in this case. A larger surface area allows for more contact between the reactants, increasing the reaction rate.

Section 2: Rate Laws

With the surface area identified as a key factor, you now investigate the rate law governing the rusting process.

**For each question...**

The M

You are a young archaeologist exploring an ancient, abandoned city. As you investigate the ruins, you notice that many of the metal structures have rusted at an unusually rapid rate. You decide to use your knowledge of chemistry to investigate the mystery behind the accelerated rusting.

You begin by examining the factors that could have affected the reaction rate of the rusting process.

- The presence of moisture in the air
- The high temperature of the environment
- The large surface area of the metal structures
- Add option

## Thinking About Affordances

# *Constructing Interactive Content*

the metal structures?

of moisture in the air

erature of the environment

ace area of the metal structures

[add "Other"](#)

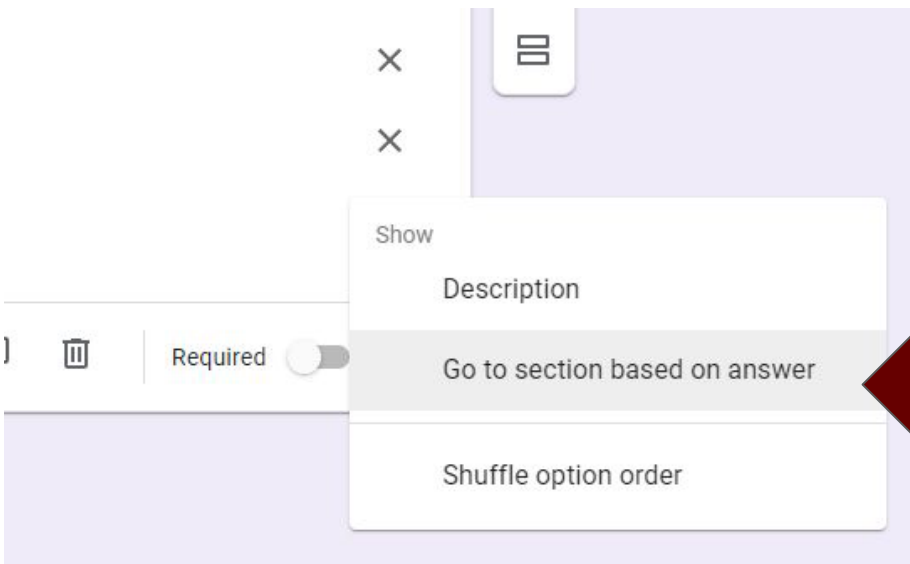


Required



## Thinking About Affordances

# *Constructing Interactive Content*



## Thinking About Affordances

# Constructing Interactive Content

You begin examining the factors that could have affected the reaction rate of the rusting process. Which of the following factors most likely contributed to the rapid rusting of the metal structures?



Multiple choice

The presence of moisture i...



Continue to next section

The high temperature of th...



Continue to next section

The large surface area of t...



Continue to next section

Add option or [add "Other"](#)

Go to section 1 (The Mystery of the Rusty Ruin)

Go to section 2 (Rate Laws - With t... rusting p...

Submit form

## Thinking About Affordances

### *Constructing Interactive Content*



It's 7 am and y  
Your first thou  
Choose betwe  
bottled water,

## Thinking About Affordances

# Constructing Interactive Content

Your island is considering a major investment in solar energy. This could reduce your carbon emissions but may divert resources from other priorities. How will you proceed?

I'd like to build solar panels all over the island!

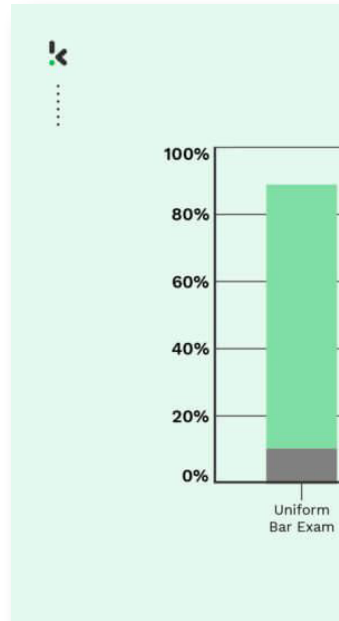
Submit



Cultivate Ethical & Inclusive Awareness Around AI

## *The New Digital Divide*

**Free models (GPT 3.5) are much worse at creative and analytical tasks than paid models (GPT-4)**



Cultivate Ethical & Inclusive Awareness Around AI

## *The New Digital Divide*

**Free models often do not have key features like the ability to upload images/files**





Cultivate Ethical & Inclusive Awareness Around AI

## *The New Digital Divide*

**Free models  
generate content  
that is easily  
identified as being  
written by AI**

## **Your t**

The nature of AI-genera  
models for GPTZero, we  
pieces in a holistic asse

Cultivate Ethical & Inclusive Awareness Around AI

## *The New Digital Divide*

**Claude is currently  
the most capable  
free AI model for  
students to use**



Cultivate Ethical & Inclusive Awareness Around AI

## *Data Privacy*

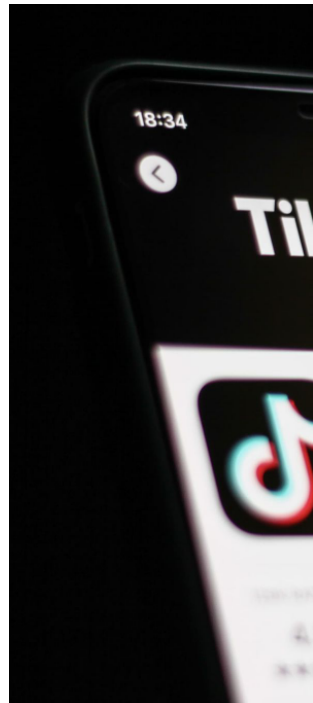
**Data entered into ChatGPT is not secure! Anything typed in could be used to train a future AI model**



## Cultivate Ethical & Inclusive Awareness Around AI

### *Data Privacy*

**This is also true of image/video AI models. TikTok is known for using user video uploads to train AI**



## Cultivate Ethical & Inclusive Awareness Around AI

### *Data Privacy*

**Warn students to never reveal sensitive information when using AI for an assignment**

**NON – PII**

- Device ID
- IP addresses
- Cookies

## Looking Forward

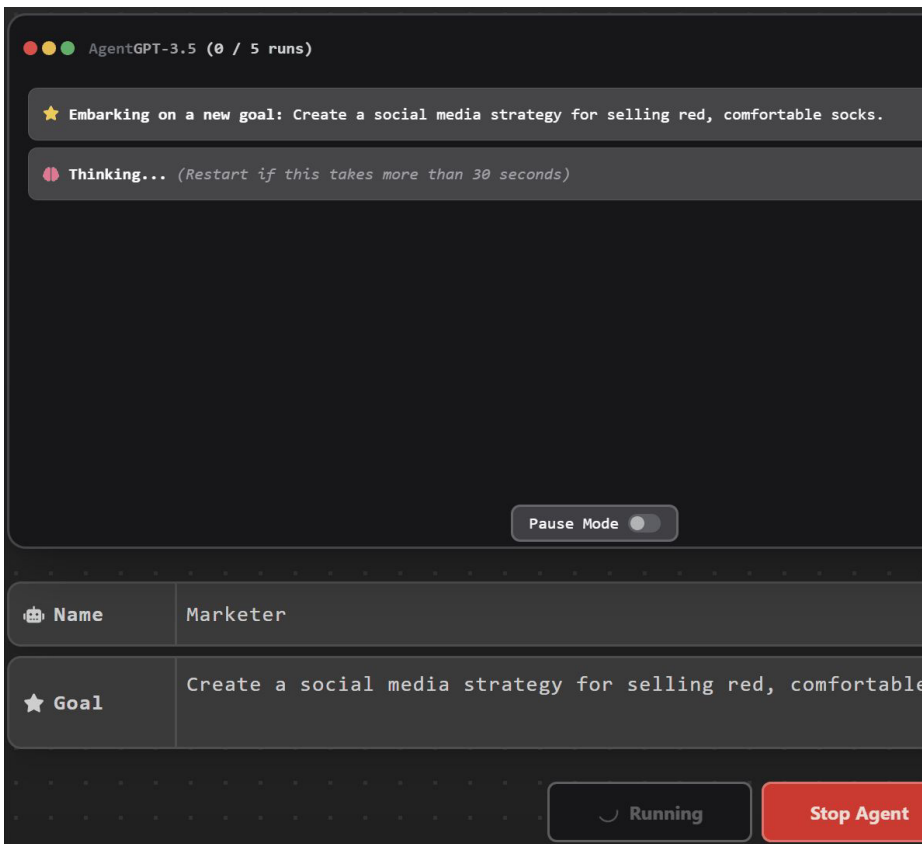
### *Still not Perfect*

	CLAUDE-3-OPUS	GPT-4-TURBO
👎 Chronology	33.3	36.0
👎 Omissions	52.0	80.8
👎 Factuality	58.3	69.2
👎 Overemphasis	20.8	34.6
👎 Underemphasis	12.5	23.1
👎 Vague/Generic	0.0	23.1
👎 Repetitive	0.0	11.5
👎 Data-Influenced	0.0	23.1
👍 Comprehensive	54.2	30.8
👍 Well-done	50.0	23.1

Table 6: Percentage of summaries per model identified by annotator comments. The upper row, colored in **purple**, outlines categories where the model is still not perfect. The lower row, in **green**, indicates categories where the model is doing well.

## Looking Forward

# Agents



AgentGPT-3.5 (0 / 5 runs)

★ Embarking on a new goal: Create a social media strategy for selling red, comfortable socks.

🧠 Thinking... (Restart if this takes more than 30 seconds)

Pause Mode

Name	Marketer
★ Goal	Create a social media strategy for selling red, comfortable socks.

Running Stop Agent

# Syllabi Policies for AI Generative Tools

A Google Doc compiled by Lance Eaton of Col/

<https://docs.google.com/document/d/1RMVwzj0vw7mi16W3U/edit#heading=h.1cykjin2vg2wx>



Looking Forward

# How will Educators Use AI for Learning

