

Incorporating AI and ChatGPT into Student Projects

Best Practices and Managing Risks
Skills21.org / info@skills21.org

Incorporating AI and ChatGPT into Student Projects

Best Practices and Managing Risks

Tell Us About You

In the chat, let us know:

- Where you are from
- Share a one-word reaction to ChatGPT

Online Today



Matt Mervis

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Director of School Services

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To learn more visit skills21.org or contact info@skills21.org

Our Agenda (in 30)



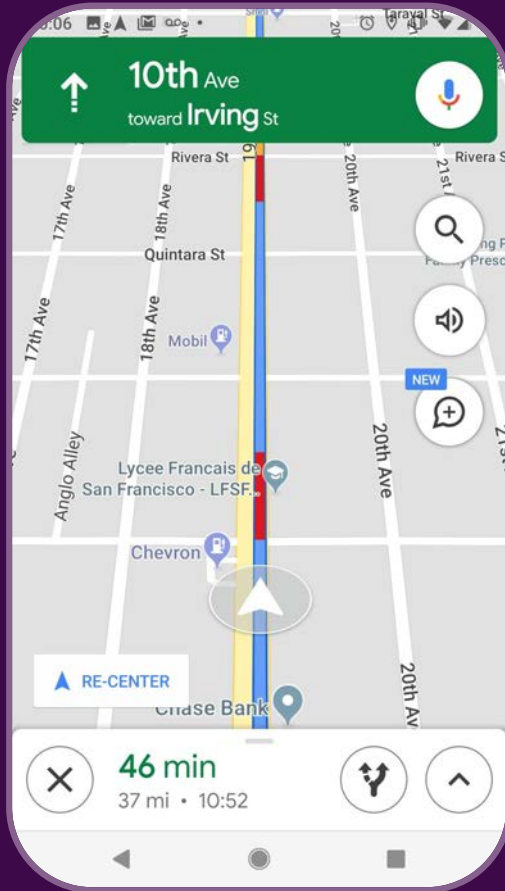
- About skills21.org
- The State of AI + Generative AI
- There Has Never Been a Better Time
- Unpack a Student Project Example with AI
- Complimentary AI Project Tools
- Wrap-Up, Questions and Next Steps

About Skills21 at EdAdvance

- 20 Year Program at EdAdvance
- NSF Supported Research
- Personalized Student Project Platforms/Challenges
- www.skills21.org



Where is AI? Everywhere!



In the Works Since 1956



"One of the most surprising and important stories of our time."
Ashlee Vance, bestselling author of *Elon Musk*

Genius Makers

The Mavericks
Who Brought AI
to Google,
Facebook and
the World

"Colourful"
Financial Times

"Enlightening"
Washington Post

Cade Metz



Sometimes AI is Just Hard



And What is Generative AI?



Training on Data



OpenAI's First Hit

Technical preview

Your AI pair programmer

fetch_pic.js

push_to_git.py

JS d3_scale.js

JS fetch_stock.js

JS material_ui.js

```
1  const fetchNASAPictureOfTheDay = () => {  
2    return fetch('https://api.nasa.gov/planetary/apod?api_key=DEMO_KEY', {  
3      method: 'GET',  
4      headers: {  
5        'Content-Type': 'application/json',  
6      },  
7    })  
8    .then(response => response.json())  
9    .then(json => {  
10     return json;  
11   });  
12 }
```

Copilot



GitHub Copilot

What is ChatGPT?

- ChatGPT is a **prototype artificial intelligence chatbot** developed by OpenAI that specializes in dialogue.
- The chatbot is a **large language model** that has been “trained” with massive amounts of text from the Internet and other sources.
- Currently a **free research offering and paid service** with 175 billion parameters
- One of **several large language models** (LLMs) including LaMDA from Google



Getting to a Million

NETFLIX

3.5 years



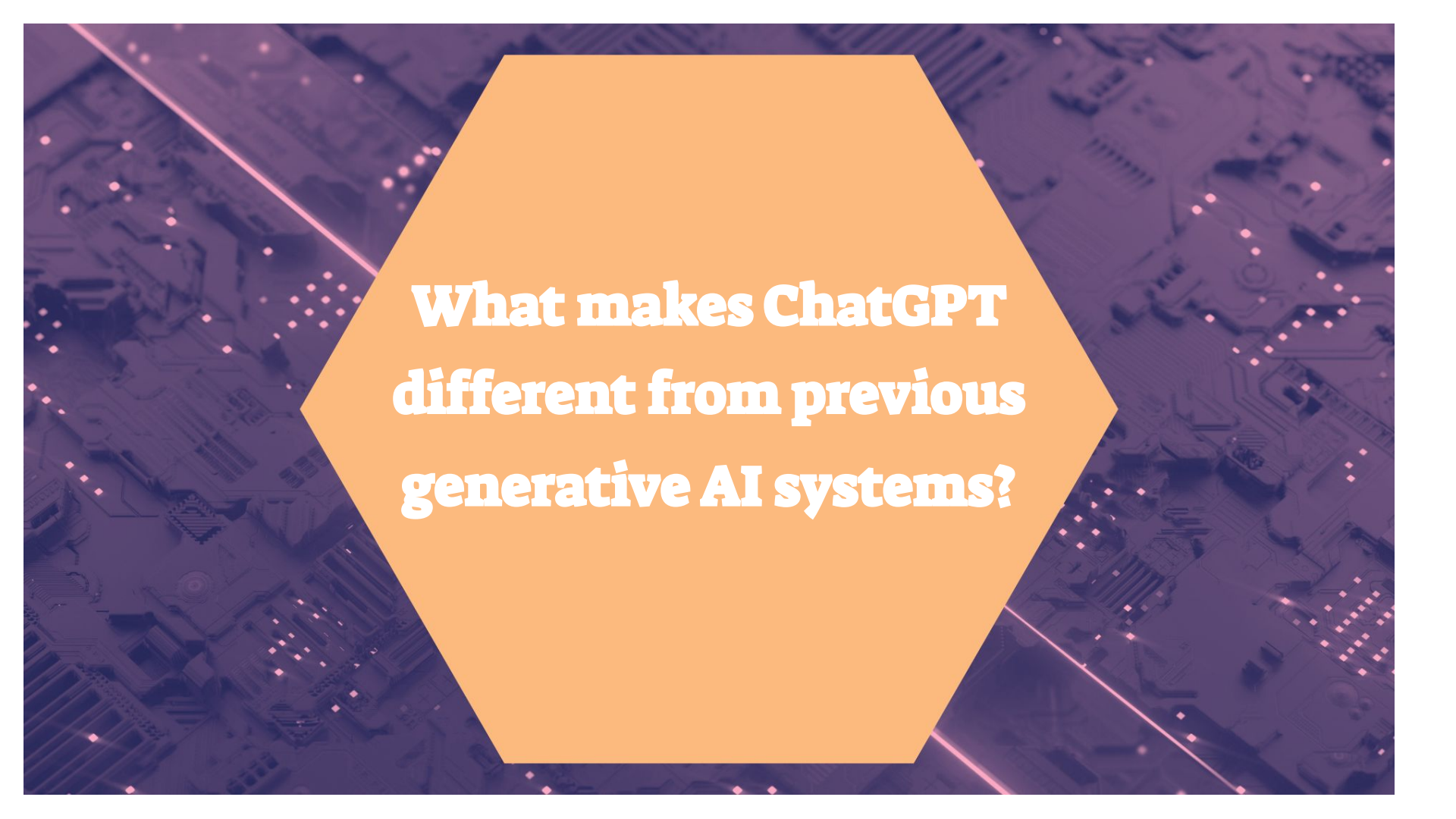
5 months



2.5 months



5 days for ChatGPT



**What makes ChatGPT
different from previous
generative AI systems?**

ChatGPT is Adaptive



Write a lesson plan on adding fractions with common denominators for fourth grade.



Here is a basic lesson plan for teaching adding fractions with common denominators to fourth grade students:



Lesson Objectives:

- Understand what a fraction is and how it is represented
- Understand the concept of adding fractions with common denominators
- Be able to add fractions with common denominators using a visual model
- Be able to add fractions with common denominators using a written algorithm

Materials:

- Fraction cards (with fractions that have common denominators)
- Fraction circles
- Whiteboard and markers
- Pencils and paper

Warm-Up:

- Review what a fraction is and how it is represented (numerator and denominator)
- Ask students to provide examples of fractions that they have seen before (e.g. $1/2$, $3/4$, $5/6$)

Direct Instruction:

- Introduce the concept of adding fractions with common denominators
- Explain that when adding fractions with common denominators, we add the numerators and keep the denominator the same
- Use the fraction cards to show an example of adding fractions with common denominators (e.g. $1/4 + 2/4 = 3/4$)
- Have students work in pairs to use the fraction cards to create their own examples of adding fractions with common denominators



Add a literature component to the adding fractions lesson.



To add a literature component to the lesson on adding fractions, the teacher could incorporate a picture book or story that relates to the topic of fractions and addition. For example, the book "Penguin on Vacation" by Salina Yoon tells the story of a penguin who goes on vacation and collects seashells in different colors. The penguin then uses the seashells to make patterns and solve addition problems, using the shells to represent fractions.



After introducing the concept of adding fractions with common denominators, the teacher could read the book aloud to the students and discuss the ways in which the penguin uses fractions to solve addition problems. The teacher could then ask the students to identify the fractions that the penguin uses and explain how he adds them together to find the total.

After reading the book, the teacher could have the students work in pairs to use fraction cards or other materials to create their own examples of adding fractions with common denominators. The teacher could also provide a worksheet or other activity that incorporates the concepts from the book and allows the students to apply what they have learned in a hands-on way.

Overall, incorporating a picture book or story into the lesson on adding fractions can help to make the topic more engaging and interesting for the students, and can provide a fun and interactive way for them to learn about fractions and addition.

ChatGPT is Conversational + Remembers Prior Conversations



Write a knitting plan for a scarf with a lace pattern using 100 grams of worsted weight wool



Here is a basic knitting pattern for a lace scarf using 100 grams of worsted weight wool:  

Materials:

- 100 grams of worsted weight wool yarn
- Size 8 knitting needles
- Yarn needle
- Scissors

Gauge:

- 4 stitches and 6 rows per inch

Finished size:

- 6 inches wide and 60 inches long

Instructions:

1. Cast on 32 stitches.
2. Work in garter stitch (knit every row) for 5 rows.
3. Row 6: Knit 1, *yo, k2tog; repeat from * to end of row.
4. Rows 7-9: Knit.
5. Row 10: Knit 1, *yo, k2tog; repeat from * to end of row.
6. Rows 11-13: Knit.
7. Repeat rows 6-13 until scarf is desired length, ending with a repeat of rows 6-9.
8. Work in garter stitch for 5 rows.
9. Bind off all stitches.
10. Weave in any loose ends and block scarf to shape.



This pattern creates a simple lace scarf that can be customized by adjusting the size of the needles and the amount of yarn used. You can also change the lace pattern to create a unique design. Happy knitting!

 Try again



What does k2tog mean?



In knitting, the abbreviation "k2tog" stands for "knit two together." This refers to a decrease stitch that is used to make the fabric narrower by knitting two stitches together as if they were one. To perform a k2tog, you insert the needle into the next two stitches on the left-hand needle as if to knit them, then wrap the yarn around the needle and pull it through both stitches at the same time. This creates a new stitch on the right-hand needle that is the result of knitting the two stitches together. The k2tog is a commonly used decrease stitch that creates a sloping line on the right side of the fabric. It is often used in lace patterns, as well as in shaping the neckline, sleeves, and other areas of a garment.  



Going back to your k2tog answer, are there other ways to decrease in knitting?



Yes, there are several other ways to decrease in knitting, in addition to the k2tog (knit two together) stitch. Some common decrease stitches include:  



- P2tog (purl two together): This decrease stitch is used to create a sloping line on the

ChatGPT can combine disparate ideas in real time



Write a biblical verse in the style of King James Bible explaining how to remove a peanut butter sandwich from a VCR



And it came to pass that a man was troubled by a peanut butter sandwich, for it had been placed within his VCR, and he knew not how to remove it.  

And he cried out to the Lord, saying, "Oh, Lord, how can I remove this sandwich from my VCR, for it is stuck fast and will not budge?"

And the Lord spoke unto him, saying, "Fear not, my child, for I shall guide thy hand and show thee the way. Take thy butter knife, and carefully insert it between the sandwich and the VCR, and gently pry them apart. And with patience and perseverance, the sandwich shall be removed, and thy VCR shall be saved."

And the man did as the Lord commanded, and lo and behold, the sandwich was removed from the VCR, and the man was saved.

And the Lord said, "Verily I say unto thee, seek not to put thy peanut butter sandwiches in thy VCR, for it is not a suitable place for such things. Rather, keep thy sandwiches in thy refrigerator or on thy plate, where they belong."

And the man heeded the Lord's words, and from that day forth, he kept his sandwiches in their proper place, and was saved from trouble and woe. Amen.

ChatGPT Works with Any Language



Here is a simple Python script for a knitting application:



```
# Import the necessary modules
import os
import sys

# Define the main function
def main():
    # Welcome the user and explain the purpose of the app
    print("Welcome to the Knitting App!")
    print("This app will help you keep track of your knitting projects
    and patterns.")

    # Ask the user if they want to view their projects or create a new
    one
    choice = input("Do you want to view your projects or create a new
    one? (v/c)")

    # If the user chooses to view their projects, show a list of their
    current projects
    if choice == "v":
        print("Here are your current projects:")
        print("1. Scarf")
        print("2. Hat")
        print("3. Socks")

    # If the user chooses to create a new project, ask for the project
    details and add it to the list
    elif choice == "c":
        project_name = input("Enter the name of your project:")
        print("Your new project, {}, has been added to the
        list.".format(project_name))

    # If the user enters an invalid choice, show an error message and
    exit the app
    else:
        print("Invalid choice. Please try again.")
        sys.exit()
```

Copy code

ChatGPT Fixes and Revises



Why is my code not working?

```
# Define the main function
def main():
    # Welcome the user and explain the purpose of the app
    print("Welcome to the Knitting App!")
    print("This app will help you keep track of your knitting projects and patterns.")

    # Ask the user if they want to view their projects or create a new one
    choice = input("Do you want to view your projects or create a new one? (v/c)")

    # If the user chooses to view their projects, show a list of their current projects
    if choice == "v":
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        print("3. Socks")

    # If the user chooses to create a new project, ask for the project details and add it to
    the list
    elif choice == "c":
        project_name = input("Enter the name of your project:")
        print("Your new project, {}, has been added to the list.".format(project_name))

    # If the user enters an invalid choice, show an error message and exit the app
    else:
        print("Invalid choice. Please try again.")
        sys.exit()

# Call the main function
if __name__ == "__main__":
    main()
```



There is a syntax error in the code. On line 17, the assignment operator `=` should be replaced with the comparison operator `==`, like this:



Copy code

```
if choice == "v":
```

In Python, the `=` operator is used to assign a value to a variable, while the `==` operator is used to compare two values for equality. In this code, the `if` statement on line 17 is comparing the value of the `choice` variable with the string `"v"`, so it should use the `==` operator instead of the `=` operator.

Fixing this syntax error should make the code work as intended. It's always a good idea to check for and fix any syntax errors before running your code, to avoid any unexpected behavior or errors.

December 6, 2022

A

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🔍

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TECHNOLOGY

The College Essay Is Dead

Nobody is prepared for how AI will transform academia.

By Stephen Marche



Paul Spella / The Atlantic; Getty

December 9, 2022



January 2, 2023



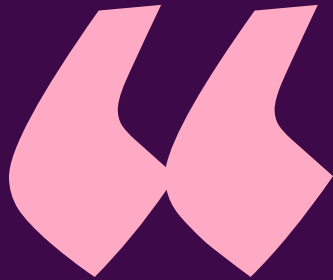
GPTZero

Humans Deserve to Know the Truth.

GET STARTED

January 3, 2023

New York City schools have banned ChatGPT, the artificial intelligence chatbot that generates human-like writing including essays, amid fears that students could use it to cheat. - **The Guardian**



Even New Teachers Can Tell Real From AI (For Now)

Asa Mervis



Seventh Grade Advisor & Middle School English Teacher



Asa Mervis

Email: amervis@berkshirecountryday.org

English

Joined Berkshire Country Day School in 2021

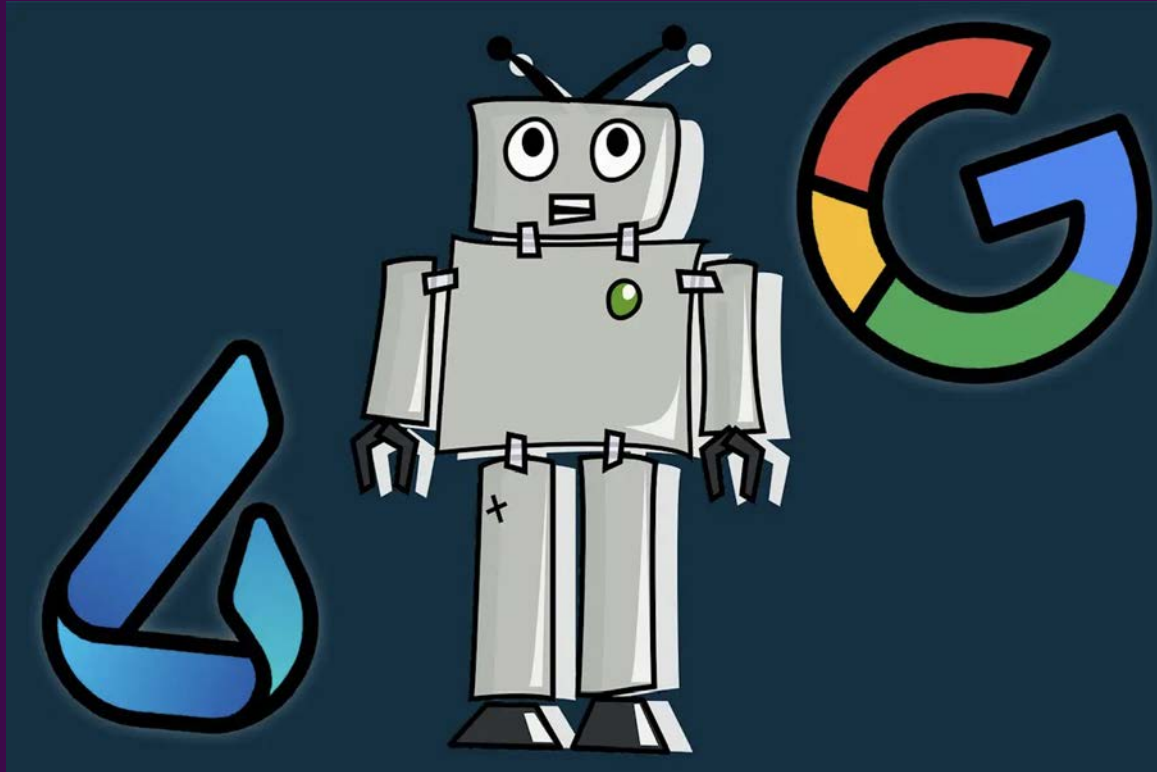
B.A. Written Arts, Bard College

M.Ed. UMass Amherst 2022

Asa is a BCD alum and teaches Middle School English. He comes to BCD from Monument Valley High School and before that, Hevreh Of Southern Berkshires. Asa believes "every teacher is drawn to the profession because at some point they discovered joy in learning. And whether the

discovery gets made while appreciating a complex novel, composing a nonsense ballad, or simply feeling one's command of the English language grow, I hope to help students find this same joy."

LLMs are Viral + Disruptive + New Literacy



We've Got a Little Time - Just a Little

TECH · CHATGPT

Unnerving interactions with ChatGPT and the new Bing have OpenAI and Microsoft racing to reassure the public

BY STEVE MOLLMAN

February 18, 2023 at 7:56 PM EST



OpenAI CEO Sam Altman discusses the ChatGPT integration for Bing at Microsoft on Feb. 7, 2023.

February
BY HIGH BY HIGH BY

It's Good to Keep in Mind

- ChatGPT is a **Free** BETA and **Paid** Platform
- Student Data **Privacy** Isn't on the Table (Yet)
- ChatGPT is **OFTEN** Hallucinates (aka wrong)
- **Intellectual Property** Protections are Limited
- LLMs Can **Reproduce Biases** from Trained Data



YES
✓



NO
✗



Artificial
~~General~~
Intelligence

NO
✗

A World With AGI = Portrait of the Grad



What are the 10 most important skills for high school graduates in a world where AGI exists?



1. Critical thinking and problem solving
2. Collaboration and teamwork
3. Communication and presentation skills
4. Adaptability and flexibility
5. Creativity and innovation
6. Emotional intelligence and empathy
7. Technical skills and computer literacy
8. Leadership and decision-making
9. Cultural and global awareness
10. Ethics and social responsibility.

A World With AGI = Portrait of the Grad



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10. Ethics and social responsibility.



Fox News
3:55



AI bot that does schoolwork could 'blow up' US education system: former teacher

Watch

Replacement or Enhancement

- Generative AI will “**disrupt**” every field where language, media and cognitive work are central.
 - Education
 - Law
 - Marketing/Business
 - Computer Science
 - Arts/Music
 - Media/Journalism
- The essential question in all these settings will be focused on **replacement and/or enhancement**



ChatGPT has only been around for 2 months and is causing untold chaos

Business Insider · 1d



This IS The Moment

WHAT

HOW

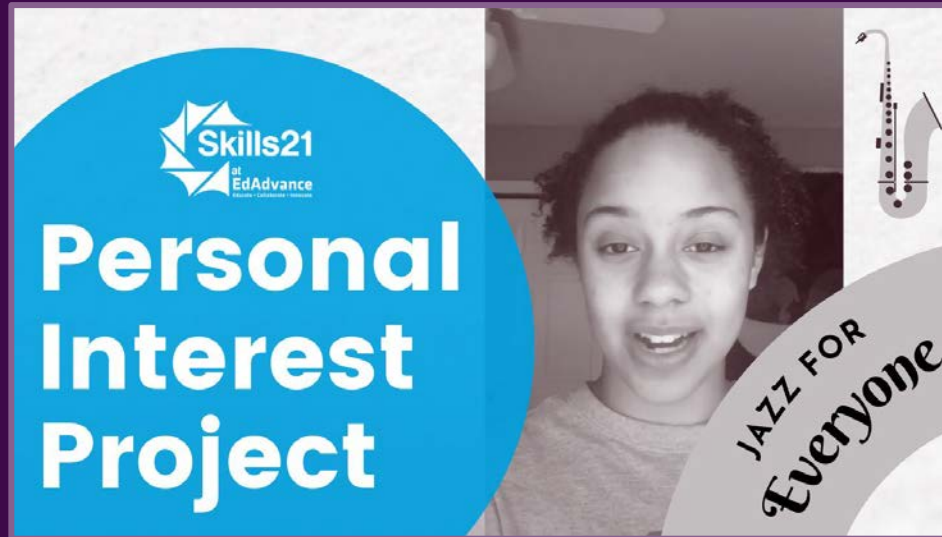
WHY

The has never been a greater opportunity and more dramatic need for...

- **WHAT** - Fundamentally RETHINKING Instructional and Assessment Priorities
- **HOW** - Leveraging AI to enhance and augment Instruction and Assessment
- **WHY** - In the service of true mastery for high value 'Portrait Skills'

What is PIP?

Personal Interest Project (PIP) provides an opportunity for students to follow their passions and complete a project where they can **“learn, solve, make, or do”** while **mastering high leverage skills** necessary for school and beyond.



A First Hand Look



Personal Interest Project (PIP) Gallery

ChatGPT Can't Do This

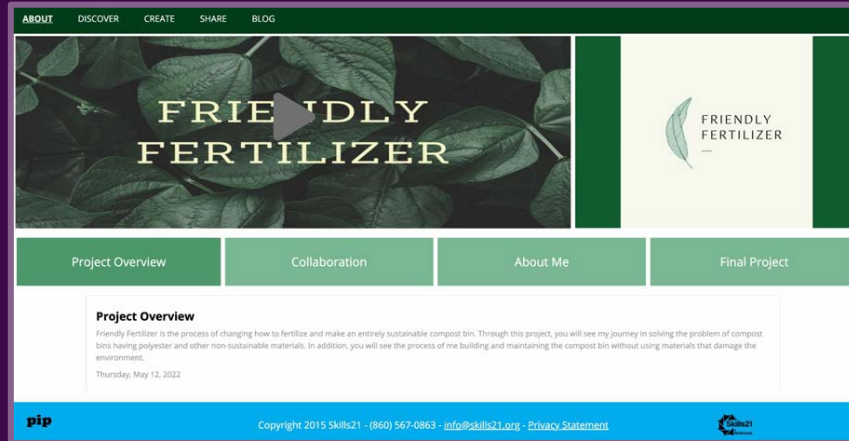


ChatGPT Can't Do This

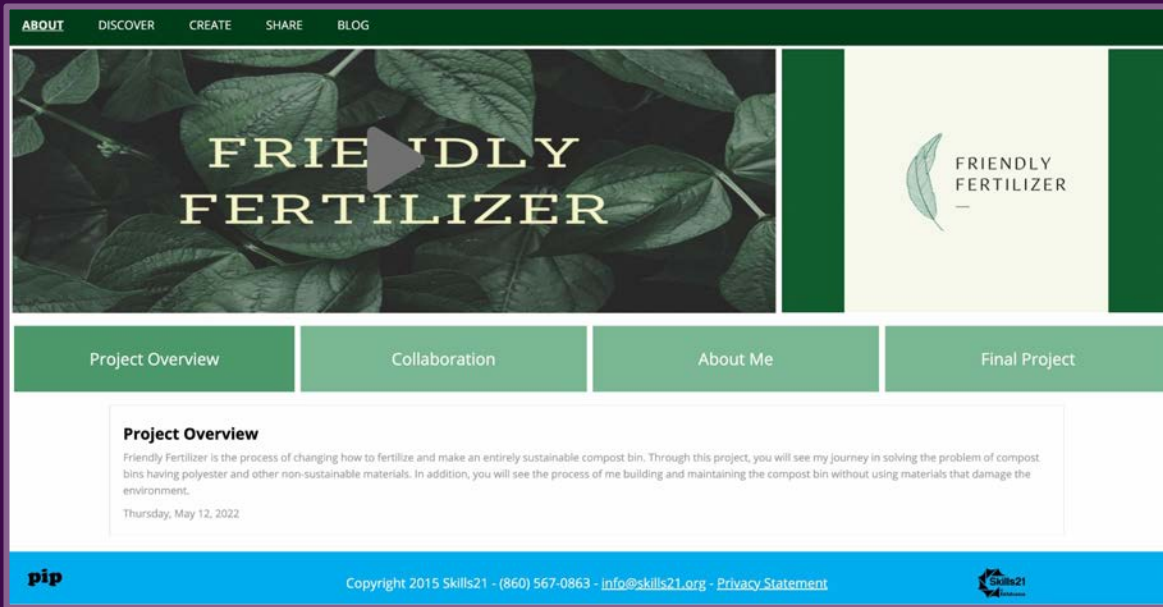
Learn how to fertilize and construct an eco-friendly compost bin that includes no polyester or other non-sustainable materials



FRIENDLY
FERTILIZER



But Can ChatGPT/AI Make These Better, Deeper & More Meaningful?



Let's Look at a Real-World Example



Core PIP ACTIVITIES

Discover

1. Find Your Passion
2. Learn, Solve, Make, Do
3. Pick a Project
4. Project Proposal

1



Create

1. Blog All About It
2. Investigate
3. Time Management Plan
4. Ready, Set, Pitch

2



Share

1. Who Are You?
2. Lights, Camera, Action
3. Final Pitch
4. How'd It Go?

3



DISCOVER

Core PIP ACTIVITIES

Discover

1. Find Your Passion
2. **Learn, Solve, Make, Do**
3. Pick a Project
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1. Blog All About It
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2



Share

1. Who Are You?
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4. How'd It Go?

3

Demo Project

[View Project](#)

Learn, Solve, Make, Do



Activity

1. Use the template to list things you want to learn, problems to solve, things to make, and things to do.
2. Have a friend or family member complete the same activity and compare lists. Add any new ideas to your list that come to mind.
3. Highlight five ideas that you are most interested in doing for your PIP. At this time you should consider the time frame, resources, and skills needed to complete each project to make sure the projects are feasible.
4. Upload your list with highlighting to your Launchpad profile. In the reflection box write about the ideas that you are considering for your Personal Interest Project.

Overview

In this activity you will list ideas of things you want to learn, make, do or problems you want to solve. Try to list at least one or two ideas in each category - the more ideas, the better! Once you have many ideas, highlight the five best ideas for your project.

Get Learn, Solve, Make, Do

Submit

Next >

Learn, Solve, Make, Do Ideas

| WHAT WOULD I LIKE TO LEARN... | WHAT WOULD I LIKE TO SOLVE... | WHAT WOULD I LIKE TO MAKE... | WHAT WOULD I LIKE TO DO... |
|----------------------------------|----------------------------------|---------------------------------|-------------------------------|
| How to skate | Food Waste | Podcast | Gardening |
| Cooking | | Winter Hat | |
| Italian Language | | | |
| | | | |

Brainstorm Sidekick



I'm a junior in High School. My Interests consist of saving the environment, writing, and building robots. I currently have four jobs ranging from a regular part-time to an online job writing captions for videos. In addition, I love hanging out with my friends. We go thrifting and spend way too much on fast food. I'm really into the environment and want to help more people compost. Any ideas?



It sounds like you have a lot of interests and passions! Here are a few project ideas that could combine some of them:

1. Building a robot to automate the composting process: You could design and build a robot that can turn compost piles, monitor moisture levels, and even alert you when the compost is ready to be used.
2. Writing a guide to composting for beginners: You could research and write a guide to composting that's tailored to people who are new to the practice. You could include information on what can and can't be composted, how to set up a compost bin or pile, and tips for maintaining a healthy compost.
3. Creating a composting program for your school or community: You could work with your school or local community to create a program that encourages and educates people about composting. This could include setting up compost bins, organizing workshops, or even starting a composting club.
4. Creating a sustainable lifestyle blog: you could create a blog that features sustainable living tips, reviews of eco-friendly products, and information about environmental issues. you can include topics such as reducing waste, composting, and shopping sustainably.
5. Creating a sustainable fast food restaurant: you could research and propose a sustainable business plan for a fast-food restaurant that focuses on reducing waste and using eco-friendly products.

These are just a few ideas to get you started, but there are many other ways you could use your interests and skills to make a difference for the environment. Let me know if you want me to expand on any of these ideas or if you have any other questions.

Core PIP ACTIVITIES

Discover

1. Find Your Passion
2. Learn, Solve, Make, Do
3. **Pick a Project**
4. Project Proposal

1



Create

1. Blog All About It
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Share

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3

Demo Project

[View Project](#)

Pick a Project



Activity

1. Get the Pick a Project template.
2. List the pros and cons for at least two of your favorite PIP project ideas from the Learn, Solve, Make, Do activity.
3. The template lists things to consider as you make your pros and cons list.
4. Review your lists and decide which project will make the best PIP for you.
5. Upload your Pros and Cons lists and in the reflection box write about which project you're going to pick!

Overview

In this activity, you will consider the pros and cons of two or three of your PIP ideas to decide which one will be your PIP project. It's important to consider things like feasibility, budget, time constraints, interest level, resources, and skills before you make a decision. If you jump into a project without really thinking about the pros and cons, you may end up disappointed if your project doesn't work out the way you hoped it would. Take your time in deciding which project will be best for your PIP.

Get Pick a Project

Submit

[Next >](#)

Pick a Project Ideas

BUILD COMPOST BIN FOR SCHOOL

PRO'S

Eco-friendly
Affordable
Prevents food waste

CON'S

School approval
Student participation

LEARN TO SKATEBOARD

PRO'S

Fun
Always wanted to do

CON'S

No experience
Could get injured
Too cold to skate?

GROW A GARDEN

PRO'S

Can show progress
Cheap

CON'S

Need to learn
Weather

Asking for a Friend Sidekick



Ok great. Here are my three most interesting ideas. Do you have any advice on which project to pick? Project Idea 1 - build a compost bin for my high school, Project Idea 2 - build and grow a garden, and Project Idea 3 - learn to skate

Project Idea 1: Building a compost bin for your high school

Pros:

- This project aligns with your interest in composting and the environment
- It could have a tangible impact on reducing waste and improving the school's sustainability
- It could be a fun and hands-on project that involves working with other students and staff
- You would be able to see the results of your work on a daily basis.

Cons:

- It may be difficult to get permission and funding for the project
- It could be time-consuming and require a lot of planning and coordination
- You would need to be able to find a suitable location for the compost bin, and make sure it is being used properly.

Project Idea 2: Building and growing a garden

Pros:

- This project aligns with your interest in the environment and sustainable living
- It could have a tangible impact by providing fresh produce for yourself, your school or community
- It could be a fun and hands-on project that involves working with other students and staff
- It can be a great learning opportunity for you and your peers, in terms of learning about plant care, gardening, and the environment.

Core PIP ACTIVITIES

Discover

1. Find Your Passion
2. Learn, Solve, Make, Do
3. Pick a Project
4. **Project Proposal**

1



Create

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4. Ready, Set, Pitch

2



Share

1. Who Are You?
2. Lights, Camera, Action
3. Final Pitch
4. How'd It Go?

3

CK

CK



CK

- CK

[View Project](#)

Overview

Overview

Overview

Overview

Overview

Project Proposal Idea



WHAT

I'm building a compost bin for my high school.



WHY

I want to turn food waste into something useful.



MENTOR

Shop Teacher
Eco Friendly Club Advisor

MATERIALS

I'll need wood, screws, tools, and dirt...

Is there anything else? I'm not totally sure what I'll need (!!!)



Going to need some help



FINAL PRODUCT

A finished and functioning compost bin and fertilizer gets used in the school garden.

Help Me Make a List Sidekick



Ok, I've selected to make a compost bin for my high school and I'm excited! I'm working on my proposal. I know what I'm going to do and why I want to do it, but I'm not sure what materials I'll need. Can you help me make a materials checklist? Oh and I want it to be all from sustainable materials and definitely no plastics!



Sure! Here's a basic list of materials you'll likely need to build a compost bin for your high school, using sustainable materials and avoiding plastics:

- Compost bin: You can build a compost bin using sustainable materials such as bamboo, cedar or untreated wood. These materials are biodegradable and also provide insulation to keep the compost at the right temperature.
- Compost ingredients: You'll need a mix of "brown" and "green" materials to create a healthy compost. Brown materials include leaves, twigs, and shredded paper, while green materials include kitchen scraps, grass clippings, and coffee grounds.
- Tools: You'll need basic tools such as a hammer, screwdriver, saw, and drill to assemble the compost bin. You may also use hand tools like a chisel and a mallet if you decide to go with bamboo or wood.
- Safety equipment: Depending on the materials you choose, you may need safety equipment such as gloves and goggles to protect yourself while building the compost bin.
- Other sustainable materials: Consider using materials like twine or raffia to tie the compost bin together, or using natural oils to treat the wood to protect it from rot.

You may also want to consider additional items like:

- A thermometer: to measure the temperature inside the compost bin,
- A moisture sensor: to measure the moisture level inside the compost bin and make



CREATE

Core PIP ACTIVITIES

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2



Share

1. Who Are You?
2. Lights, Camera, Action
3. Final Pitch
4. How'd It Go?

3

✶

✶



✶

- ✶

✶

- ✶

[View Project](#)

Overview

Overview

Overview

Overview

Blog Prompts

Progress

Describe the progress you have made in the past week or two.

Successes

Write about a major success you've recently had in your project.

Overcoming Roadblocks or Obstacles and Making Pivots

What is one roadblock or obstacle you've encountered recently in your project?

Mentors/Collaboration with Others

Describe a recent conversation or email exchange you've recently had with your mentor.

Time Management

How well have you stuck to your time management plan?

Research

What is something interesting you learned in your research recently?

Community Connection

How are you connecting to a community?

Motivation

Have you seen your excitement level for the project rise or decline lately? Why do you think this is happening?



Blog Examples



Time Management

Friday, March 25, 2022 | 3:21 PM EDT

We have made it to building the compost bin. I have made the bottom of it, and we are set to be done with the building portion this weekend. Next week, I will fill it with soil and other nutrients to create fertilizer.

Attachments



Building Time.mp4



Progress

Tuesday, February 15, 2022 | 6:54 PM EST

This week I was gifted a pallet, so I will be using that and returning all of the wood I bought. This is more sustainable and minimally helps deforestation. If more people see how to use old wood to make a composting bin, it lessens the demand for new wood. On Friday, I will be taking apart the pallet to build the compost bin.

Attachments



New plan.png



Research

Tuesday, January 04, 2022 | 1:24 PM EST

This week I learned the different types of composting there are. I can pick which style I want to move forward with this. In my research, I realized that there are many different compost types. My favorite so far is EMO composting. EMO stands for Effective Micro-Organisms; this is a method typically intended for indoor composts but can be used outdoors. This method involves filling up a bin thoroughly and then closing the top for a week or more.

Attachments



Composting Methods.png



Set Back

Friday, February 11, 2022 | 3:32 PM EST

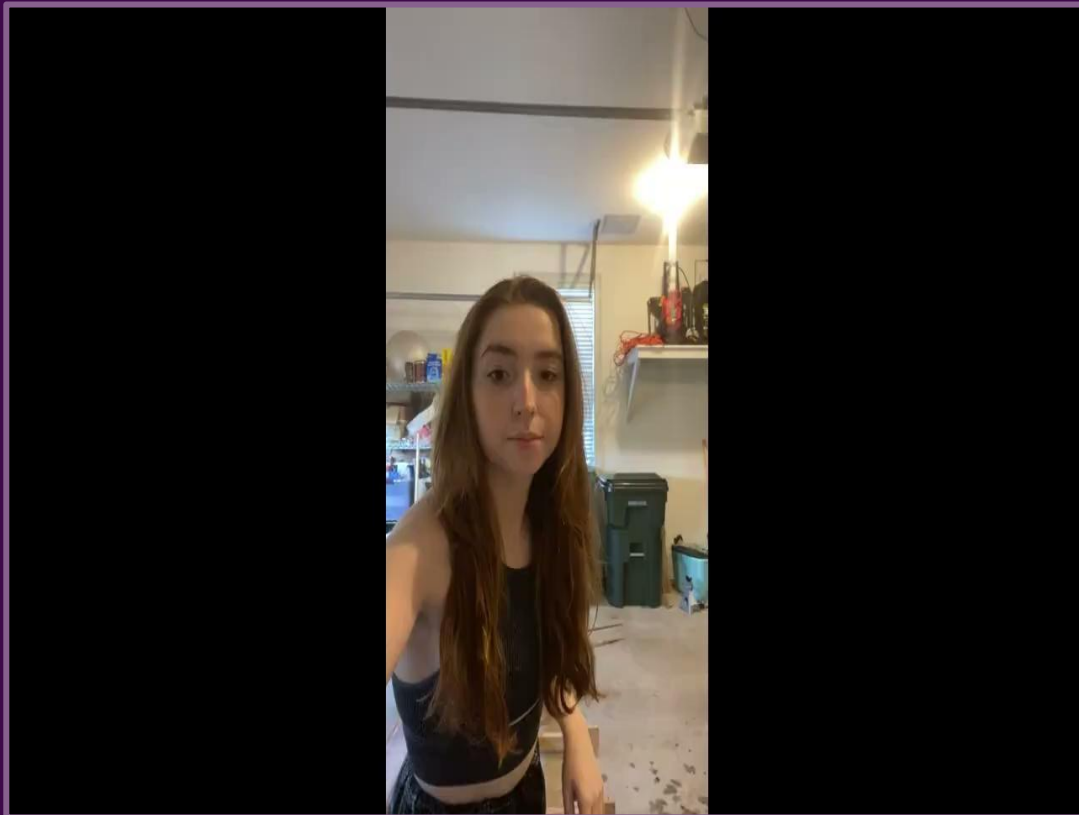
This week I had a bit of a set back I thought I was going to be able to fully build my compost bin today but I was met with the wrong part and I have to go back to home depot and get the correct tools.

Attachments



3529c5a0b9df1b94644c8b73d1f32e3.MOV

Blog Example



Core PIP ACTIVITIES

Discover

1. Find Your Passion
2. Learn, Solve, Make, Do
3. Pick a Project
4. Project Proposal

1



Create

1. Blog All About It
2. **Investigate**
3. Time Management Plan
4. Ready, Set, Pitch

2



Share

1. Who Are You?
2. Lights, Camera, Action
3. Final Pitch
4. How'd It Go?

3

Demo Project

[View Project](#)

Investigate!



Activity

1. Get the Investigate template from Launchpad.
2. Find a resource that will be helpful for your project and document it on the template. Be sure to include as much information as possible including the name of the source, the url or link (if applicable). Summarize the information that this source provides.
3. Find at least four resources that will be helpful to you for your project.
4. As you develop your project you may continue to need resources so this list can grow throughout the development process.
5. Upload your Investigate template to Launchpad.

Resources

[Sample of Investigate](#)

Overview

When doing any project it is important to gather information before you start. Gathering resources will help you learn about your topic and will be necessary to help you complete your project. Resources can come from websites, YouTube videos, books, or even other people. It is important to keep track of your resources to give credit to your sources and to be able to return to resources as you make progress on your project.

Get Investigate

Submit

Next >

Investigate Idea

BUILD COMPOST
BIN FOR SCHOOL

RESOURCES

Eco Friends Club at school

Youtube or Tik Tok

Teachers at school

Blogs or Vlogs

Research Sidekick



I'm working on my research plan. What do you think might be good sources for my research on building a sustainable compost bin for my school?



Here are some potential sources for researching building a sustainable compost bin for your school:

1. Online resources: Websites like the USDA's Natural Resources Conservation Service, the Environmental Protection Agency (EPA), and the Composting Council Research and Education Foundation provide information on how to build and maintain a compost bin.
2. Books: There are many books available on composting and sustainable living, such as "Let It Rot!" by Stu Campbell, and "The Rodale Book of Composting" by Deborah L. Martin. You can find these books online or at your local library.
3. Experts: Reach out to local experts such as Master Gardeners, or professors from a nearby college or university who specialize in environmental science, composting, or sustainable living.
4. Community composting organizations: Look for community composting organizations or groups in your area who may have experience in setting up and maintaining compost bins. They may have valuable information and advice to share.
5. Online forums and communities: Join online communities or forums dedicated to composting and sustainable living to gain insights, tips, and ideas from other individuals who are passionate about the same topic.
6. Personal observations: you can also gain insights by observing other compost bin set-ups, and noting what works and what doesn't.

It's important to note that not all sources are created equal, so it's important to evaluate the credibility and reliability of the sources you use. Be sure to use a combination of sources, including primary sources (such as research studies) and secondary sources (such as news articles and reviews) to get a well-rounded view of the topic.

Intelligent Tutor/Sidekick



Hi there. I'm doing a student interest project where I plan to build a sustainable compost bin to be stored at my school. The problem is I don't know anything about compost and how to build this bin. Do you think you can help prepare me for this cool project?



Yes, I can help you with your project! Composting is the process of breaking down organic materials such as food scraps, yard waste, and paper products into a nutrient-rich soil amendment called compost. To build a compost bin, you will need to create a container to hold the organic materials and provide the right conditions for them to decompose.

Here are some basic steps you can follow to build your compost bin:

1. Choose a location for your bin that gets plenty of sun and has good drainage.
2. Decide on the size of your bin. You can build a bin using a variety of materials such as wood, concrete blocks, or plastic bins.
3. Build the bin using your chosen materials. You can use screws or nails to hold the wood together, or use wire to hold the concrete blocks in place.
4. Make sure the bin has proper ventilation by drilling holes in the sides and bottom of the bin.
5. Add your organic materials to the bin, such as food scraps, yard waste, and paper products.
6. Turn the compost regularly to aerate it and help it break down faster.
7. Water the compost as needed to keep it moist but not waterlogged.
8. Your compost will be ready to use in several months, depending on the materials you use and how often you turn it.

There are many resources online and offline that can provide more detailed instructions on how to build your compost bin, as well as information on what can and cannot be composted.

Intelligent Tutor/Sidekick



Ok, this is a great starting place. The bin is going to be near the cafeteria. Are there any foods students should not put in the bin? Can they really put paper in there? How about cardboard lunch trays?



It's great that you're placing the bin near the cafeteria, as this will make it easy for students to compost their food waste. However, it is important to note that not all food can be composted. Here are some examples of what should not be added to the compost bin:

- Meat, fish, and dairy products: These can attract pests and create unpleasant odors.
- Fatty foods: Oil, butter, and mayonnaise can also attract pests and create odors.
- Diseased plants: If any of the yard waste has a disease, it should not be added to the compost bin.

In terms of paper and cardboard, these are generally fine to add to the compost bin. Paper products such as paper towels, napkins, and newspaper can be added to the compost, as well as cardboard lunch trays. It is important to avoid adding glossy or coated paper, such as magazines, as these are not biodegradable.

It is also important to remember that the compost bin should be kept in a clean and sanitary condition to prevent pests and odors, so it would be good to have a designated person in charge of keeping the bin clean, and educating the students on what can and cannot be put in the bin.

Intelligent Tutor/Sidekick



Ok. Going back to the beginning. Is the compost that comes out of adding stuff in the same as fertilizer?



Compost and fertilizer are similar in that they both provide nutrients to plants, but they are not the same thing.

Compost is a soil amendment made from decomposed organic matter such as food scraps, yard waste, and paper products. It is a natural product that provides a variety of nutrients to plants, including nitrogen, phosphorus, and potassium. Compost also improves soil structure, increases water retention, and can suppress plant diseases and pests.

Fertilizer, on the other hand, is a manufactured product that is specifically formulated to provide plants with specific nutrients. Fertilizers can be made from a variety of natural or synthetic materials, and are typically high in one or more of the essential plant nutrients: nitrogen, phosphorus, and potassium.

While compost can be used as a fertilizer, it is not as concentrated as commercial fertilizers. So, while it will provide some nutrients, it may not be sufficient to provide all the necessary nutrients for optimal growth. That's why is a good idea to use compost in combination with other soil amendments or fertilizers, to enhance the soil and nourish your plants.

Intelligent Tutor/Sidekick



Ok. How long does it take to go from food scraps on our lunch trays to actual compost?



The time it takes for food scraps and other organic materials to turn into compost can vary depending on a number of factors, such as the size and composition of the materials, the temperature, moisture level, and aeration of the compost pile, and the types of microorganisms present.

A well-managed compost pile can take anywhere from a few weeks to several months to fully decompose, with the average being around 2 to 6 months.

To speed up the process, you can chop or shred the materials into small pieces so that they decompose more quickly. Also, turning the pile regularly to aerate it and providing enough moisture will help the microorganisms to break down the materials faster. Also, you can use a thermometer to monitor the temperature of the pile, if the temperature is high enough (between 130 - 160 F) that means that the decomposition process is happening faster.

It is also important to note that not all compost is the same, and some materials will break down more quickly than others. For example, fruits and vegetables will break down faster than wood chips or leaves.

It is a good idea to keep track of the composting process, and monitor the volume and appearance of the compost. When the compost has reached a dark, crumbly texture and has a rich earthy smell, it is ready to be used.

Intelligent Tutor/Sidekick



Yeah that's not as quick as I had imagined. Given the timeline, do you think it's realistic that more and more people can stop using commercial fertilizer and switch to composting?



While composting can provide many benefits for plants, it may not be a sufficient replacement for commercial fertilizer for some people and in some cases.

Composting is an excellent way to recycle organic waste and reduce the amount of waste sent to landfills, but it may not provide all the nutrients that plants need in the quantities required. For example, if you have a large farm or grow a variety of crops, composting alone may not provide enough nutrients to sustain healthy growth.

However, for small scale gardening, composting can be a great alternative to commercial fertilizers. Compost can provide a slow-release form of nutrients, making it ideal for use in gardens, flower beds, and lawns. It can also be used as a soil amendment to improve soil structure and increase water retention.

Also, it is important to note that many commercial fertilizers are made from non-renewable resources and can have negative environmental impacts. Composting, on the other hand, is a natural and sustainable way to recycle organic waste and improve soil health.

Overall, it is important for individuals to consider their specific needs and the resources available to them when deciding whether to use compost or commercial fertilizer. It is also worth noting that composting and the use of commercial fertilizers can complement each other, and in many cases it is advisable to use them in combination to ensure the best results.

Intelligent Tutor/Sidekick



Gotcha. Are there other ways like community compost that can make it easier to get compost out to people even if they don't have the time or materials to do it themselves at home?



Yes, there are a variety of community composting programs that can make it easier for people to access compost without having to do it themselves at home.

One example is a curbside compost collection program, where residents can set out their food scraps and yard waste on designated days, and a collection truck will come by to pick it up. This is similar to curbside recycling and garbage collection programs. This type of program can make it easy for people to compost without having to manage a compost bin themselves.

Another example is community composting sites or drop-off locations. These are typically managed by local government or community organizations, where residents can bring their food scraps and yard waste to a centralized location for composting. These sites typically have large-scale composting equipment, such as windrow turners, that can quickly break down the organic materials.

Another option is to share composting resources with neighbors. For example, people can share compost bins, or take turns maintaining a compost pile in a shared backyard. This can allow people to compost without having to invest in their own equipment.

Intelligent Tutor/Sidekick



Earlier you had mentioned someone needs to maintain the compost bin. Can you help write a fun, short volunteer job description for a Compost Champion at my school?



Sure! Here's an example of a fun, short volunteer job description for a Compost Champion at your school:

Position: Compost Champion

Responsibilities:

- Be the guardian of our school's compost bin, making sure it's always healthy and happy!
- Regularly turn and mix the compost materials using a pitchfork or shovel.
- Add new organic materials to the bin, such as fruit and vegetable scraps, lawn clippings, and dry leaves.
- Keep the bin and surrounding area clean and free of debris.
- Educate your classmates about the importance of composting and how to do it correctly.
- Help create composting workshops and demonstrations for the school community.
- Represent the school in local composting competitions and events.

Requirements:

- Passion for composting and the environment
- Willingness to get your hands dirty
- Strong communication and organizational skills

Intelligent Tutor/Sidekick



This has been super helpful and you've answered many of my questions. Are there questions I have not asked that you think I should be considering for my sustainable school compost bin project?



I'm glad I could help! Here are a few additional questions that you may want to consider for your sustainable school compost bin project:

- What are the school's policies and procedures for composting? Are there any regulations or guidelines that need to be followed?
- Who will be responsible for managing the compost bin? Will it be a school staff member or a student volunteer?
- How will the compost be used? Will it be used in the school's garden or landscape, or will it be donated to local community gardens or farms?
- How will the school communicate the composting program to students and staff? Will there be signage or informational materials provided to educate people on what can and cannot be composted?
- Will the school have a composting program in place to compost food waste generated in the cafeteria? If so, will it be linked to the outdoor compost bin you are building?
- How will you measure the success of the program? Will you track the amount of waste diverted from the landfill, or the nutrient content of the compost produced?
- Will the school have a strategy in place to monitor and maintain the compost bin, ensuring it is running efficiently and that it does not create unpleasant odors or attract pests?

By considering these questions and planning accordingly, you can ensure that your sustainable school compost bin project is successful and beneficial for the school and the community.

Next Gen Intelligent Tutor - Video



Sam Charrington
The TWIML AI Podcast

ChatGPT
Narration



Synthesia
Voice & Avatar



Next Gen Intelligent Tutor - VR



Next Gen Intelligent Tutor



Holographic Tutor
Created in DALL-E

Core PIP ACTIVITIES

Discover

1. Find Your Passion
2. Learn, Solve, Make, Do
3. Pick a Project
4. Project Proposal

1



Create

1. Blog All About It
2. Investigate
3. **Time Management Plan**
4. Ready, Set, Pitch

2



Share

1. Who Are You?
2. Lights, Camera, Action
3. Final Pitch
4. How'd It Go?

3

Tick Tock



PERSONAL INTEREST PROJECT

▶ 0:00

1. Get the Tick Tock template from Launchpad.
2. Break your project down into smaller, manageable steps. Estimate how much time each step will take and set a deadline for yourself.
3. Upload your plan to your Launchpad profile.
4. As you work on your project, update your time management plan as needed.

- Sample Tick Tock

Overview

Get Tick Tock

Submit

Time Management Plan Idea

PLAN FOR THE COMPOST BIN!!

| <u>THINGS TO DO</u> | <u>DUE DATE</u> |
|--------------------------|-----------------|
| Complete research | January |
| Gather ALL the materials | February |
| Work on bin | March |
| Setup bin in school | April |
| Wrap up project | May |
| | |
| | |

Time Management Sidekick



Can you help me draft a time management plan for my student interest project for building a sustainable compost bin to have at my school? Also can you share your thoughts in a table format?



Sure! Here is a sample time management plan for your student interest project:

| Task | Deadline | Time Allocated |
|-------------------------------------|----------|----------------|
| Research compost bin designs | 2 weeks | 10 hours |
| Gather materials | 1 week | 5 hours |
| Build compost bin | 3 weeks | 15 hours |
| Test and make adjustments | 2 weeks | 10 hours |
| Present project to school community | 1 week | 5 hours |

You can adjust the time allocated and deadlines as needed. It's also important to note that you should not only schedule time for working on the project, but also for breaks, rest, and other obligations. Additionally, it might be helpful to set small, intermediate goals to help you stay on track and motivated.

It's also important to mention that you should consider the following things to make your compost bin sustainable:

- Use sustainable materials: Look for materials that are durable, long-lasting, and easy to recycle or repurpose.
- Make it easy to use: Design the compost bin so that it's easy for people to use and maintain.
- Educate others: Share information about composting and how to use the compost bin with your school community.
- Monitor and adjust: Regularly check the compost bin and make adjustments as needed to ensure it's working effectively.

Hope this helps! Let me know if you have any other questions.

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4. Project Proposal

1



Create

1. Blog All About It
2. Investigate
3. Time Management Plan
4. **Ready, Set, Pitch**

2



Share

1. Who Are You?
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4. How'd It Go?

3

Demo Project

[View Project](#)

Ready, Set, Pitch



Activity

1. Write a script for your project pitch. Your script should take 30 seconds to 2 minutes to read aloud. In your pitch you should describe your project idea, why you want to do this project, how you are going to complete the project and what your final product will be. You may also ask for help, ideas, or suggestions from the audience.
2. Practice your pitch several times before you give the pitch to an audience.
3. Give your pitch and record it! You can do it in person, over a video conference tool like Zoom, Skype, or FaceTime, or even just through a phone call. Be sure to record your pitch and the feedback and response from the audience.
4. Upload your video or audio to your Launchpad profile.

Resources

- [Sample Ready Set Pitch](#)

Overview

Sharing your project idea and plan with others will help you get feedback and improve or refine your project. When you share your idea you could ask specific questions or leave it open for the viewers to give you suggestions. It's important to write out a script and practice your pitch before you give it so you feel confident in front of others and they get the best, most complete version of your pitch.

Submit

Next >

Friendly Fertilizer Pitch





SHARE

Core PIP ACTIVITIES

Discover

1. Find Your Passion
2. Learn, Solve, Make, Do
3. Pick a Project
4. Project Proposal

1



Create

1. Blog All About It
2. Investigate
3. Time Management Plan
4. Ready, Set, Pitch

2

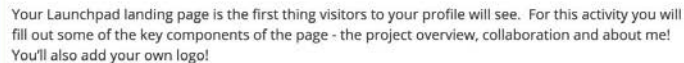


Share

1. Who Are You?
2. Lights, Camera, Action
3. Final Pitch
4. How'd It Go?

3

Overview



Upload Logo

Project Overview

Collaboration

Next >



1. Submit your Project Overview: describe your project in three to five sentences. What was it you aimed to do in your project and why?
2. Submit your Collaboration: describe how you worked with others in this project and how they helped you.
3. Submit your About Me: provide a brief description of yourself. You should include your name and some information that tells your audience a little more about you - things you live to do, something that makes you unique or maybe how your project connects to your future career aspirations or hobbies. Add a picture of yourself as well!
4. Design and add your logo to your profile. Your logo should represent your project and can use colors, shapes, or images.
5. Proofread all of these sections. Remember, it's your first impression for anyone who looks at your profile and you want to make sure that grammar, spelling and punctuation are all correct.

Resources

- [Design Your Logo!](#)
- [Sample Project Overview](#)
- [Sample Collaboration](#)
- [Sample About Me](#)
- [Sample Logos](#)

Who Are You?

[ABOUT](#) [DISCOVER](#) [CREATE](#) [SHARE](#) [BLOG](#)





[Project Overview](#) [Collaboration](#) [About Me](#) [Final Project](#)

Project Overview

Friendly Fertilizer is the process of changing how to fertilize and make an entirely sustainable compost bin. Through this project, you will see my journey in solving the problem of compost bins having polyester and other non-sustainable materials. In addition, you will see the process of me building and maintaining the compost bin without using materials that damage the environment.

Thursday, May 12, 2022

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Discover

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2. Learn, Solve, Make, Do
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Create

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2



Share

1. Who Are You?
2. **Lights, Camera, Action**
3. Final Pitch
4. How'd It Go?

3

Demo Project

Lights, Camera, Action!



Activity

1. Gather images, video footage, animation or anything else you want to put in your video.
2. Using a video editing tool like Spark Video or iMovie, put together a video trailer of 30 seconds to one minute and thirty seconds.
3. Upload the trailer to your Launchpad profile.

Resources

Sample Trailers

- [Cooking in 4 Months](#)
- [Matrixed](#)
- [Art Through the Ages](#)
- [Landscaping](#)
- [I Am Fit & Fabulous](#)
- [DAC 2021](#)

Some Video Editing Platforms to Choose From:

- iMovie
- Adobe Spark
- WeVideo
- Powtoon

[View Project](#)

Overview

To complete your project's Launchpad landing page, you need to add a project trailer. This brief video lets your audience see what you did for your project. You can use images, video footage, animation, slides or something else to make your trailer. Many students add music in the background or add a voice over narration. This trailer should spark interest in your project and give your audience a quick overview of what you did.

Submit Trailer

Next >

Lights, Camera, Action Idea

1



Start with a shot of the logo

Music starts

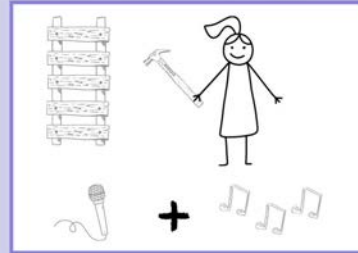
2



Clip 1 - Working on the project

Narration starts + Music Continues

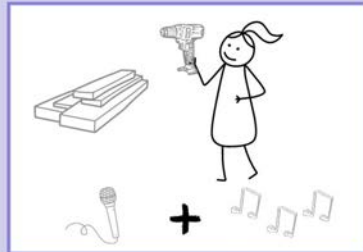
3



Clip 2 - Breaking down pallet

Narration + Music continues

4



Clip 3 - Putting Bin Together

Narration + Music continues

5



Clip 3 - Finished compost bin

Narration + Music fade

6



Hollywood Sidekick :)



Can you help me draft a video trailer script for my student project to build a sustainable compost bin for my high school?



Sure! Here is a sample script for a video trailer for your student project:

Opening shot: A shot of the school's campus with students walking around.

Narrator: (voiceover) At XYZ High School, we're always looking for ways to be more environmentally friendly. But what about our waste?

Cut to: Close-up of a trash can overflowing with waste.

Narrator: (voiceover) Every day, tons of food scraps and organic waste are thrown away. But what if we could turn that waste into something valuable?

Cut to: Close-up of a hand turning a compost pile.

Narrator: (voiceover) Introducing the XYZ High School Sustainable Compost Bin Project.

Cut to: Aerial shot of a group of students working on a compost bin.

Narrator: (voiceover) Led by students, for students, this project aims to build a compost bin on campus that will convert food waste into nutrient-rich compost.

Cut to: Close-up of a plant growing in compost.

Narrator: (voiceover) Not only will it reduce our waste, but it will also provide a valuable resource for our school's gardens and landscaping.

Cut to: Close-up of a student holding a sign that says "Save the Planet, Compost."

Narrator: (voiceover) Join us in making XYZ High School a more sustainable community. Support the XYZ High School Sustainable Compost Bin Project.

Closing shot: A shot of the school's logo with the words "Support the Sustainable Compost Bin Project" written underneath.

Core PIP ACTIVITIES

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2



Share

1. Who Are You?
2. Lights, Camera, Action
3. **Final Pitch**
4. How'd It Go?

3

Final Pitch



Activity

1. Prepare a brief script for you to use for your presentation. You don't have to memorize it word for word, but you should be prepared to speak smoothly about your project. If you have learned a skill or created a physical product make sure you show that as well! Your presentation should be between three and five minutes.
2. Find an audience and set a time for your presentation. You could present to friends or family in a live presentation or schedule a video conference with friends or family.
3. Video record your presentation and the feedback from your audience.
4. Submit your Final Pitch video by clicking the **Submit Button**.
5. Finally, add your final project by clicking the **Final Project Button**. This could be in, but not limited to, the following formats:
 - o Video
 - o Pictures
 - o Website
 - o Podcast

Resources

Example final pitch

- [Skateboarding with Rubie](#)
- [I Am Fit & Fabulous](#)
- [StarGazer](#)
- [Say No To Plastic Water Bottles](#)

[View Project](#)

Overview

Once your project is finished it is time to share it with an audience. It's your chance to show off all the work you did and your final product! You can present to a live audience or through the computer. Dress professionally and prepare for your presentation by rehearsing your speech. And show off your final project! If you've learned a new skill, demonstrate it. Show off something you made. Ask your audience for feedback and let them ask you questions. Be sure to film the presentation!

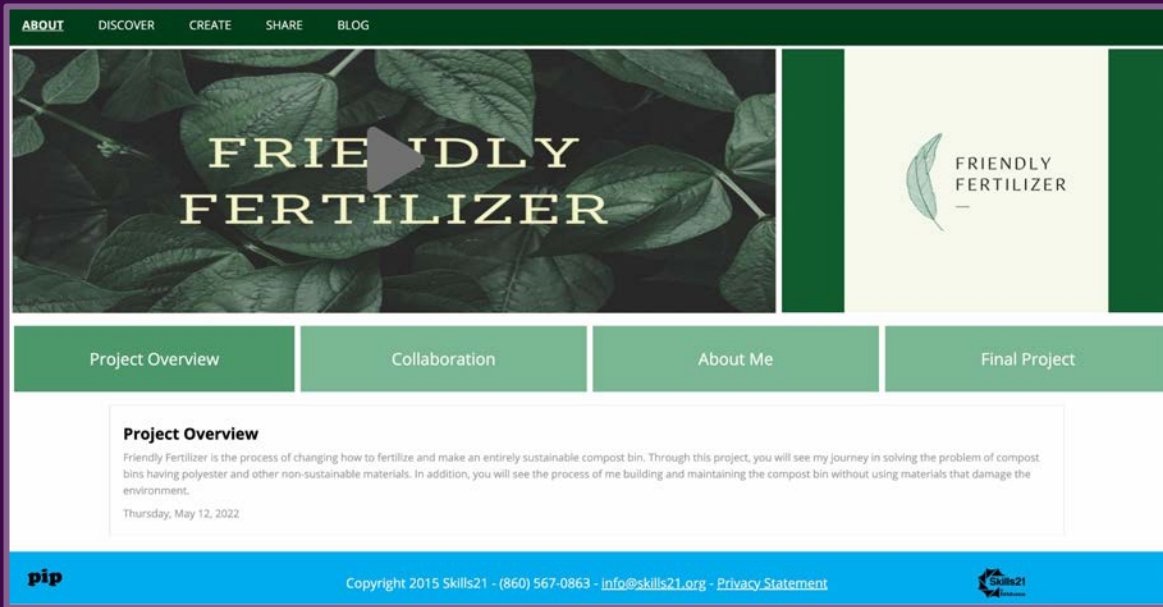
Submit

Final Project Button

Friendly Fertilizer Final Pitch



But Can ChatGPT/AI Make These Better, Deeper & More Meaningful?



How Else can the AI Be a Project Sidekick?



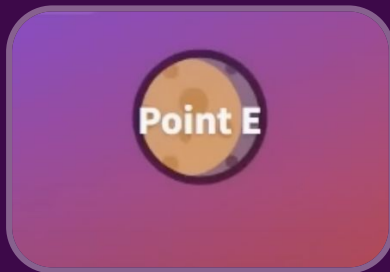
Creates images given a text prompt



Creates dialogue given a text prompt



Creates audio given a text prompt



Creates a 3D object given a text prompt



Creates video given a text prompt

So much to digest...in the short run

- Do your own version of **GPT Can't Do This**
- **Experiment** and **Explore**
- Lean into the “**conversation**” and overload on **context**
- Explore **Prompt Engineering** and **AI literacies**
- Consider - **Us & The AI** rather than **Us vs the AI**



How to Partner with Skills21 @ EdAdvance

- **PIP, Capstone** and **JOY** (SEL) + GPT
- Professional Development and Student Sessions (AI)
 - Building **AI Literacy** for Students and Teachers
 - **Prompt Engineering** and **Question Techniques**
 - Exploring **Best Practices** in Your Setting



Please Complete our Short Survey

TAKE SURVEY



Other Questions?



Reach Out



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