STEAM Entrepreneurship and Research Network
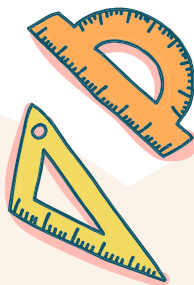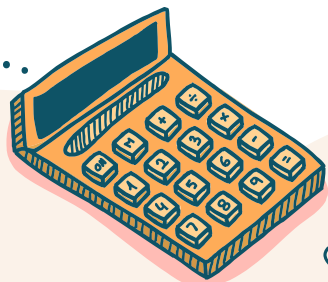
Innovative Interdisciplinary Activities

Presented by: Audrey Oh

Governor's Emergency Education Relief (GEER) Fund 2021-22

TEACHERS, YOU ROCK!

Agenda

01

INTRODUCTION and Background (STEAMER)

02

INNOVATIVE INTERDISCIPLINARY ACTIVITIES

03

HOW THE PUZZLES FIT TOGETHER

We hope you will join Us!

01

STEAMER

SCIENCE
TECHNOLOGY
ENGINEERING
ART
MATHEMATICS
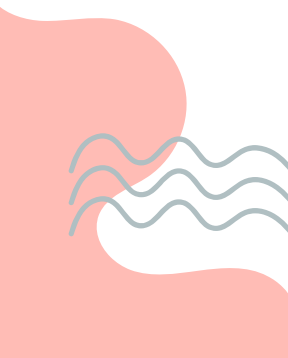**E**NTREPRENEUR
RESEARCH

Flash News!
Our proposal journey

GEER Proposal submitted in partnership with the **UH STEM Pre-Academy**, **Waipahu** Intermediate and **Ilima** Intermediate,

- **June 2**: Submitted GEER Proposal
- **June 6**: Advanced to the Next Phase - The Pitch
- **June 15**: 15 minute Virtual Pitch to Reviewers
- **June 30**: Notified Provisional Award; of **$150,000**; top **1%** of all applications submitted

I was honored to have represented Washington Middle School as its alumni and as one of the Science Club founders,
... Audrey Oh

August 4, 2021, Governor Ige issued a press release which expanded the funded projects to 31 ~ the total amount of $8.1 million

STEAM Entrepreneurship and Research Network *(STEAMER)*

Presented for the
Governor's Emergency Education Relief (GEER) Innovation Fund Grant
15 June 2021, 2:50pm

Michael Harano

Principal

Washington Middle School

Jason Akamine

Science Teacher

Washington Middle School

Ken Kozuma

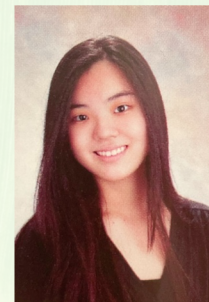Career and Technical Education Teacher

Waipahu Intermediate School

Randall Shinn

Science Teacher

ʻIlima Intermediate School

Audrey Oh

Senior, Punahou School

Alumna, Washington Middle School

Project Point of Contact 🎯 Michael Harano, michael.harano@k12.hi.us

Governor's Emergency Education Relief (GEER) Grant

Network: Washington Middle – Ilima Intermediate – Waipahu Intermediate

BACKGROUND.   FUND INNOVATIVE INITIATIVES

- **Purpose:** Address impact that COVID pandemic has had on students, families and educators in Hawaii; provide quality and impactful educational services and support on-going functionality of schools

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- **STEAMER project:**
  - uniquely led by both **teachers** and **students**
  - offers an environment that **empowers students** to take initiative, make decisions, iterate and refine outcomes through **interdisciplinary learning activities or lessons**
  - Centers on sustainable agriculture

- STEAMER transforms a Washington's hydroponics program into an educational playground

STEAMER

VISION

- STEAMER: **Upgrade the H2 facility** to create an AWESOME hydroponics – sustainable agriculture facility: research + fun facility for students, teachers and alumni
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- **Integrate this facility** and mobile projects into **student education!**

- Teachers at WMS work together to establish an engaging **INTERDISCIPLINARY STYLE OF LEARNING**!
- Involve the university, community and subject matter experts
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- ~~GET~~ GOT MONEY FOR THE SCHOOL TO USE FOR EDUCATION!!!!

TRANSFORMING our space together to provide exciting opportunities for students and teachers
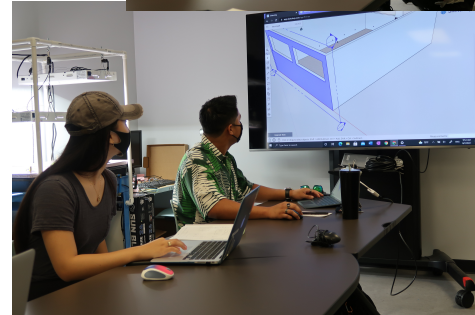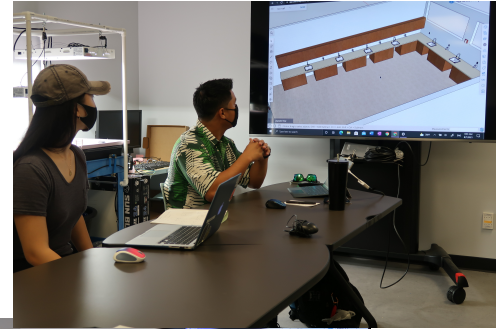
(Older version)

DETAILS REVEALED SOON

So here are the OBJECTIVES

1. What do the **students want to be when they grow up**?
2. How can we **best prepare** the students for the future?
3. What skills can they develop in middle school, utilizing the **amazing resources** we have?
4. How can we create **interdisciplinary activities** that empowers students to take initiative, make decisions, iterate and refine their outcomes?
5. Students can **work safely** and allow **teachers flexibility**
6. Access the **current situation + make it better**   :)

The answers to these questions and objectives will be achieved through the GEER Grant !
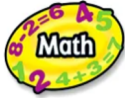
02

INNOVATIVE INTERDISCIPLINARY ACTIVITY

The STEAMER Enterprise

INNOVATIVE INTERDISCIPLINARY ACTIVITY

EXAMPLE TECHNOLOGY Activity or Project

Okay, we would like to have the *STEAMER development documented in different technology formats. I am in desperate need of *marketing materials for our hydroponic enterprise! Be creative! We would like the funders and community aware of our progress and of the awesome work of our students!

I see! Okay! I will relay the message to the student technology consultant team!

This is exciting! I will create an Activity Description & Plan . The team can create a storyboard, take photos, video, conduct interviews, etc.

CLIENT

Teacher to student technology consultants

Okay team! Listen up! We have an important order! We have a client that needs **documentation** and **marketing media** material for their STEAMER enterprise! I have the order right here with all the details. We have a timeline of about a month to finish this!

Idea time!!

CLIENT REQUEST– organize – plan – research – execute tasks – team review – make modifications – client review & feedback – more research – improve – present to client

EXAMPLE 2: English Language Learner Activity

Thank you for meeting me. We are in need of **recipes** for our produce and also have the need to ***explore different types of hydroponically grown produce** that might appeal to **diverse cultures**

CLIENT

That is a great request. I will relay the request to the food and market research consultants!

EXAMPLE 3: SOCIAL STUDIES Activity

Kahoot Game: Research ... Design ... Test ... Improve
...FINAL PRODUCTS!

Washington Middle School – GEER Project

The STEAMER Enterprise - draft v.1.0

Interdisciplinary Activities & Projects: Art

Vision and Goal:

Subject	Art
Customer	Mr. Akamine and Science club – marketing team
Project/Idea Options	○ Design a customer informational produce handout (template)
	○ Create and install a artistic statement of the STEAMER project (i.e. mural, signage, etc.
Project Advisor – Teacher(s)	
Description:	
Customer Requirements:	
Resources/Materials Required	
Number of Classes/Students	

Number of Classes/Students	
Schedule/for Activity-Project (Month-weeks)	
Planning: Teacher's work	
Planning: Student's work	
Student/Team Output and Product(s)	

Project Template

A schedule and timeline always works fine

Week 1

Week 2

Week 3

Week 4
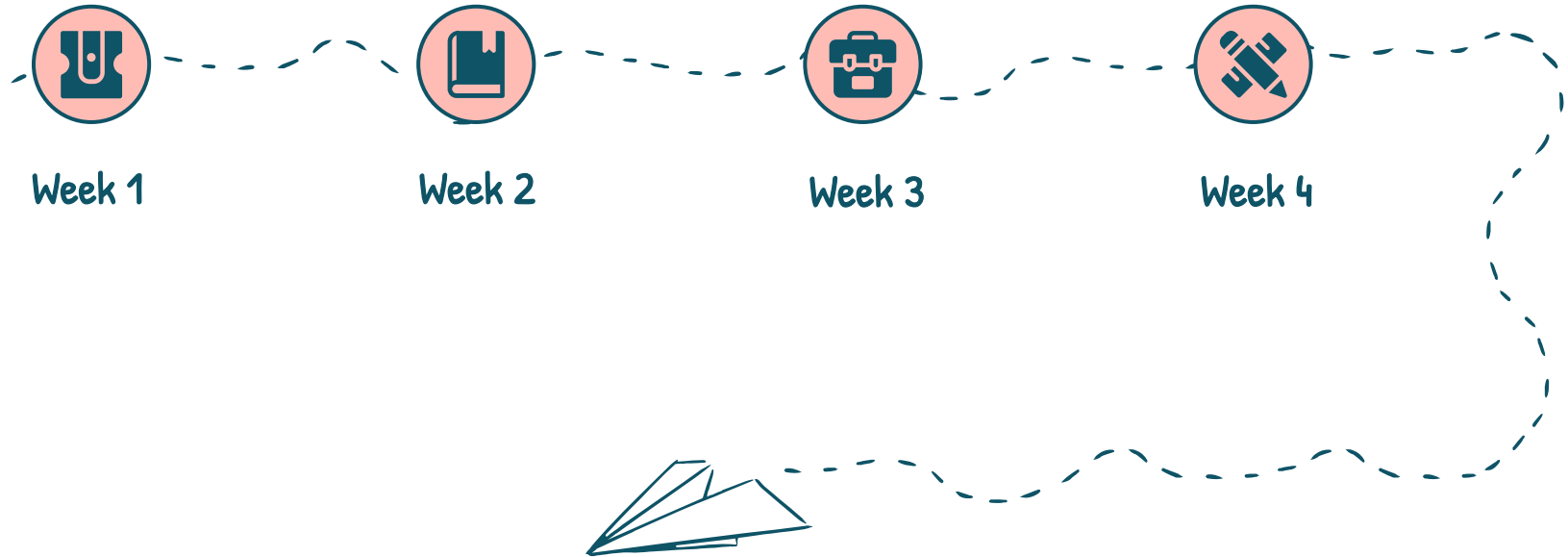
03

PUZZLE PIECES FIT TOGETHER

Output:

Okay team! Listen up! We plan to **feature** and use student and **student** team products in the **STEAMER enterprise**!

Teachers! We plan to **share** teacher developed activities so students from other schools can enjoy the same experiences as Washington students!

GO EAGLES! Let's Have Fun!

Featuring ...

THANK YOU FOR LISTENING

Do you have any questions?
Did this make sense.....