The RESET:
STEM LEARNING ACCELERATION, TECHNOLOGY INTEGRATION, AND WELLNESS

VI-ISERP
2022 STEM Institute

Virtual Sessions: May 31 - June 3
In-Person Sessions: June 6 - June 10
Table of Contents

01 Welcome
02 Our mission and vision
03 2022 STEM Institute Workshops
04 Stipend eligibility
05 STEM Institute Schedule (TBA)
06 Our team and partners
Welcome to STEM Institute 2022!
We appreciate your dedication and commitment to the children of the USVI. We are excited about the diversity of offerings we are able to bring due to new and existing partnerships with organizations and businesses that believe in our capacity to build opportunities for STEM educational excellence for every student.

You could have devoted your summer to other pursuits, but your commitment to excellence in teaching and student learning continues to inspire our team and your students to aim higher, dream bigger, and **dare to begin a RESET in education for learning acceleration, the integrations of technology, and promotion of wellness**. We will take the challenges of COVID-19 and the revealed disparities in education equity as a catalyst to build anew. Thank you, and let's begin the revolutionary work of teaching and learning together.

*Dr. Lawanda Cummings*
Welcome to the 2022 STEM Institute!

This year’s theme represents critical areas in STEM education affected during the pandemic and aims to provide solutions that will benefit students’ outcomes and teachers’ effectiveness. **VI-ISERP’s STEM Institute**, located at the University of the Virgin Islands, offers a two-week summer professional development opportunity for in-service teachers who teach grades 6-12.

Although created specifically for STEM teachers in grades 6-12, our professional development program welcomes teachers from all grades and content areas. Our major intervention is **Project-Based Learning (PBL)**, where the focus is using the current research areas of our EPSCoR researchers in coral reef restoration, mangrove restoration, and agriculture. This intervention allows our teachers to create interdisciplinary PBL units within local contexts.

One goal this year is to build an interdisciplinary team of teachers grouped by local context topics (i.e., coral reefs, mangroves, agriculture) that create PBL units and are also willing to continue in our PBL Certificate Program in Fall 2022. This program is free to all teachers! The teachers who qualify will earn a stipend based on their attendance and completion of deliverables. This year, our sessions will address each major theme: **STEM Learning Acceleration, Technology Integration, and Wellness.**
Our mission and vision

The Virgin Islands Institute for STEM Educational Research and Practice (VI-ISERP) is the Education and Workforce Development component of The Virgin Islands Established Program to Stimulate Competitive Research (VI-EPSCoR).

VI-ISERP focuses on promoting STEM learning in formal and informal spaces in the USVI. This work is critical in developing an empowered STEM workforce for the future. Formal learning focuses on 1) Teacher Professional Development, 2) Mentoring and Research Infrastructure, and 3) Undergraduate Enrichment. Informal Learning focuses on 1) Enrichment of science clubs/programs and 2) Community outreach events.

Developing a strong STEM workforce begins with the effective preparation of students in K-12 and undergraduate classrooms. We are achieving this by training teachers in innovative STEM teaching techniques, effective use of educational technology, and integrating local science (Ridge 2 Reef research) into curricula.

Our Teacher Professional Development program has long-standing collaborations with the Virgin Island Department of Education and Board of Education with over 4000 hours of professional development for local teachers to date. We have hosted weekly “Teacher Talk Fridays” to help local teachers navigate the stresses and professional demands of the COVID-19 pandemic.

Dr. Nadia Monrose Mills, the Director of the institute, guides a team that provides Teacher PD programming during the academic year, an intensive STEM Institute in the summer, and a PBL Certificate program building curricula aligned to local environmental science research.

Our work in education balances on 3 pillars

1. EQUITY AND INCLUSION: Combating structural and psychological barriers to URM inclusion and retention
2. CULTURALLY RELEVANT STEM LEARNING: Facilitating STEM learning in partnership with R2R researchers and staff
3. SUSTAINABILITY OF STEM RESOURCES: Developing expertise, support, and resources in STEM education for the local community and beyond
These sessions will focus on two areas:
1. Teacher well-being and
2. Social-Emotional Learning training and creating a Trauma sensitive classroom.

Dr. Dara Hamilton, Assistant Professor of Psychology at the University of the Virgin Islands, will facilitate the teacher well-being sessions. In these sessions, teachers will learn coping mechanisms focused on psychological and physical well-being to find joy and creativity in this vital profession.

The student-centered sessions will focus on Social Emotional Learning (SEL) and Trauma-Informed Practices. The Master’s Educational Foundation will facilitate these sessions, providing training and support to teachers in general and special education settings.

STEM Learning Acceleration

In these sessions, teachers will be exposed to best classroom practices to accelerate student learning due to the deficiencies caused by COVID 19 school interruptions. These sessions include PBL training and Teaching Literacy in the STEM Classroom.

Technology Integration

Three courses in Computer Science and Maker Education will be provided by Pathfinders Summer Institute 2022, sponsored by Georgia Tech College of Computing and Infosys.

Wellness

These sessions will focus on two areas:
1. Teacher well-being and
2. Social-Emotional Learning training and creating a Trauma sensitive classroom.

Dr. Dara Hamilton, Assistant Professor of Psychology at the University of the Virgin Islands, will facilitate the teacher well-being sessions. In these sessions, teachers will learn coping mechanisms focused on psychological and physical well-being to find joy and creativity in this vital profession.

The student-centered sessions will focus on Social Emotional Learning (SEL) and Trauma-Informed Practices. The Master’s Educational Foundation will facilitate these sessions, providing training and support to teachers in general and special education settings.
This year, we will offer hybrid options. All training will be on UVI campuses.

2022 STEM Institute

- Week 1: Virtual Training May 31-June 3
  - Various presenters will conduct all virtual training via Zoom

- Week 2: In-person Training June 6-10
  - 2-day training by Pathfinders Summer Institute 2022
  - 3-day intensive PBL Training

The Virgin Islands Institute for STEM Education Research and Practice (VI-ISERP) has partnered with Georgia Tech’s College of Computing, Infosys, and Pathfinders to bring you a high-quality professional development opportunity in Computer Science and Maker Education, Pathfinders Summer Institute 2022, as part of our annual Summer Teacher Workshops.

- In St. Thomas/St. John District, the Pathfinders Summer Institute 2022 will be June 6-7.
- In St. Croix District, the Pathfinders Summer Institute 2022 will be June 9-10.

There are three different trainings available for every level of computer science experience. You can only attend one (1). These trainings are all in person and located on UVI campuses.

We welcome all teachers, after-school programs, and administrators to participate in this opportunity to increase access and awareness of opportunities in computer science within a local context.
Course Descriptions

Option 1: Level Up Your Finch Robot with Python & AI

Are you interested in teaching Python and Computer Science concepts in an engaging way? In this hands-on course, you will practice programming using the Finch robot. To make sure you get the most of this PD, each participant will receive a FREE Finch Robot to code alongside us!

Participants will have the opportunity to apply their knowledge during live classes immediately and challenge themselves with asynchronous activities. We will cover various topics such as setting up your Finch robot, loops, recursion, machine learning, etc. At the end of this course, you will have example projects, sample code, and teaching strategies to implement with your students.

This course is for teachers with experience in at least one coding environment (blocks or text) with introductory programming concepts such as algorithms, variables, and control structures.

Prerequisites:
To participate in this course, you should:
- Be planning to or currently teaching Python at a middle or high school level.
- Have a Windows, Mac, or Chrome laptop.

Recommended for grades 6-12

Option 2: Chibitronics

Participants explore the intersection of new media arts, technology, and engineering and imagine and build interactive, glowing papercraft. Participants will learn to build expressive circuits on paper with easy-to-use peel and stick electronics (LED stickers), copper tape, and a variety of art and craft materials.

Participants will then program these circuits to be interactive using a reusable microcontroller in a clip form factor, designed to be moved easily between projects. Participants will learn to program their circuits with Microsoft Makecode, a block-based programming language that runs in the browser on phones, tablets, or computers.
Finally, they will apply these techniques to a "paper city" design challenge, creating tangible paper models to illustrate what they have imagined interactively.

Paper engineering plus physical computing can take your paper city from villages and hamlets in history to future cities off-planet to infinite imagined hubs of humanity. Build a city that can support aspects of your content area: Social Studies, Reading / Language Arts, Math, and Science, all added to your computer science curriculum. We are here to guide, support, and invigorate!

You will receive: papercraft materials, Scotch tape, Washi tape, Circuit Sticker STEM Starter Kit, Love to Code Creative Coding Kit, LED Circuit Stickers, conductive plastic, conductive fabric tape, and copper tape.

Prerequisites:
To participate in the Chibitronics course, you should:
- Have a Laptop that can accept a headphone jack and USB A (You can always use an adapter).

Recommended for grades 3-8

Option 3: Teacher Tech Knowledge Microbit Series

Learn how to integrate Microbit across the curriculum. Participants will use the Microbit to help teach concepts across curriculum areas. Two tracks will be offered to ensure that all participants receive practical implementation strategies for the classroom. All participants receive 10 micro:bits and accessories that will allow students to interact with the real world while learning to code. Track 1 is aimed at teachers with no previous experience using the Microbit while Track 2 is for those educators who have participated in the Tech Knowledge for Teachers workshops previously.

Recommended for grades 3-12

REGISTER NOW >
Stipend Eligibility Guidelines

To be eligible for a stipend, you must be able to provide proof of employment, citizenship, and work status.

You may register for virtual and in-person workshops or personalize the training to your specific interests by registering only for those sessions you want to attend.

If you qualify to receive a stipend, you will receive $50 for half-day attendance and $100 for full-day attendance.

**H1B Visa holders are not eligible for stipends.** However, if you do not qualify for a stipend, you are encouraged to attend the workshops.

1. Proof of employment as an in-service K-12 educator
   a. Acceptable documents
   i. Current Employment ID Card or
   ii. Employment letter from the school/VIDE
2. Proof of US citizenship or permanent resident status
   a. Acceptable documents
   i. US Passport or
   ii. Permanent Resident card
3. If you are not a US Citizen or permanent resident, provide proof of Work Status
   a. Acceptable documents
   i. J-1 Visa
4. Download ACH form, complete and sign. Submit form (click form for download)
Directions to Submit Stipend Paperwork

All documents should be current, in PDF format, and named accordingly: First Name, Last Name, Description of Document. Also complete and submit the Direct Deposit Form to expedite the payment process.

See examples below:
John Doe Employment ID
Joseph Doe Employment Letter
Jane Doe US Passport
Joanna Doe Permanent Resident Card
James Doe J1-Visa
Janet Doe Direct Deposit form

Submit stipend paperwork here.
(click on folder)
A note from the STEM Institute Director:

Thank you for choosing to attend the 2022 STEM Institute at UVI. We are glad that you joined us as believers in the potential of our children and educators to master STEM learning and prepare for the growing STEM workforce. We know that together we can "RESET" after COVID-19 to build an equitable educational path for all learners.

Dr. Nadia Monrose Mills
The RESET:

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Thank you!

To our partners, VI-EPSCoR, NSF, and the University of the Virgin Islands for daring to begin an educational RESET with VI-ISERP!