

Implementation and Documentation of Technology Training for Seniors and the PiMERS Middle School Program

REU Outreach Team

Dr. Darnell
Johnson

Outreach Team
Mentor

<http://nia.ecsu.edu/ur/0809/teams/math/djohnson.html>



Team Members

Steffi Walthall (SCAD)



Derek Morris (ECSU)



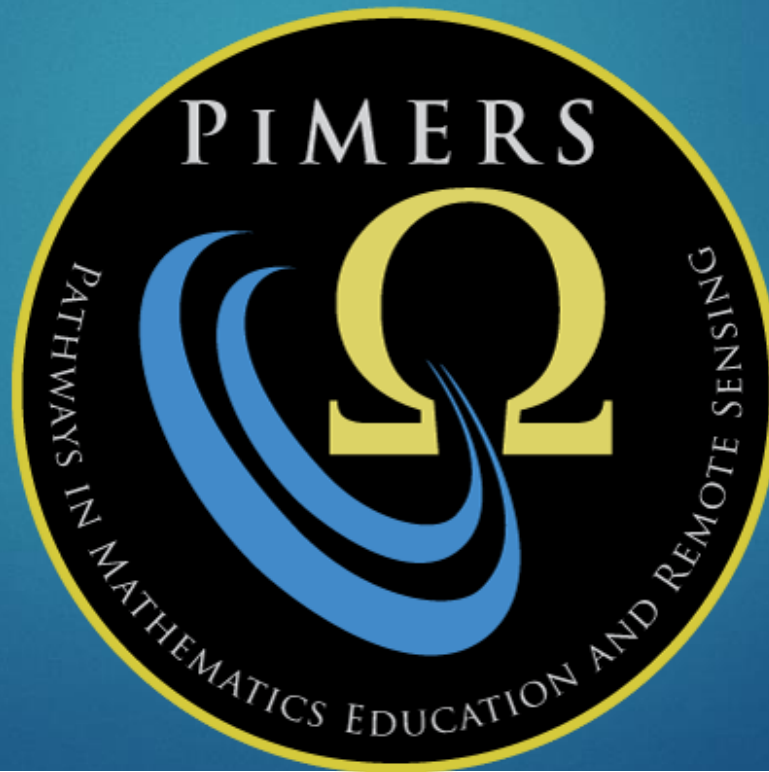
Overview

- ▶ Purpose
- ▶ Program Events
 - ▶ PiMERS Middle School Program
 - ▶ Preparation & Lesson Planning
 - ▶ Opening
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 - ▶ Lunch Seminars
 - ▶ Field Trips
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 - ▶ Instructional Sessions
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- ▶ Acknowledgements
- ▶ Questions

Purpose

The Pathways in Mathematics Education and Remote Sensing (PiMERS) program is a part of a STEM (science, technology, engineering and mathematics) based initiative that is the result of the joint effort of Elizabeth City State University (ECSU) and NASA Langley Research Center (LaRC). The Association of Computer and Information Science/Engineering Departments at Minority Institutions (ADMI) also supported this contribution to the NASA national efforts for achieving excellent education. The goal of PiMERS is to foster and nurture the interest of minority students in STEM-related fields, specifically mathematics and remote sensing. The REU Outreach program worked underneath the PiMERS grant to host two events- the 2016 PiMERS Middle School Program and the 2016 PiMERS Senior Computer Training Camp at Zion Baptist Church. The PiMERS Middle School program allowed the student-researchers opportunities to engage in other related fields such as computational chemistry and aviation, computer science, hydrology, robotics and engineering. During the span of this program, the researchers partook in seminars that were created to induce interest in STEM related fields. Students also partook in math and robotics seminars that were intended to gauge their knowledge based off the Common Core standards implemented by the North Carolina school system. The PiMERS Senior Computer Training program was intended to provide basic computer and internet training for senior citizens. The PiMERS Senior Computer Training Camp consisted of biweekly training sessions that ran for five consecutive weeks. Each session was formulated to cover different aspects of modern technology in order to instill basic computer skills in the participants.

PiMERS Middle School Program



Materials & Preparation

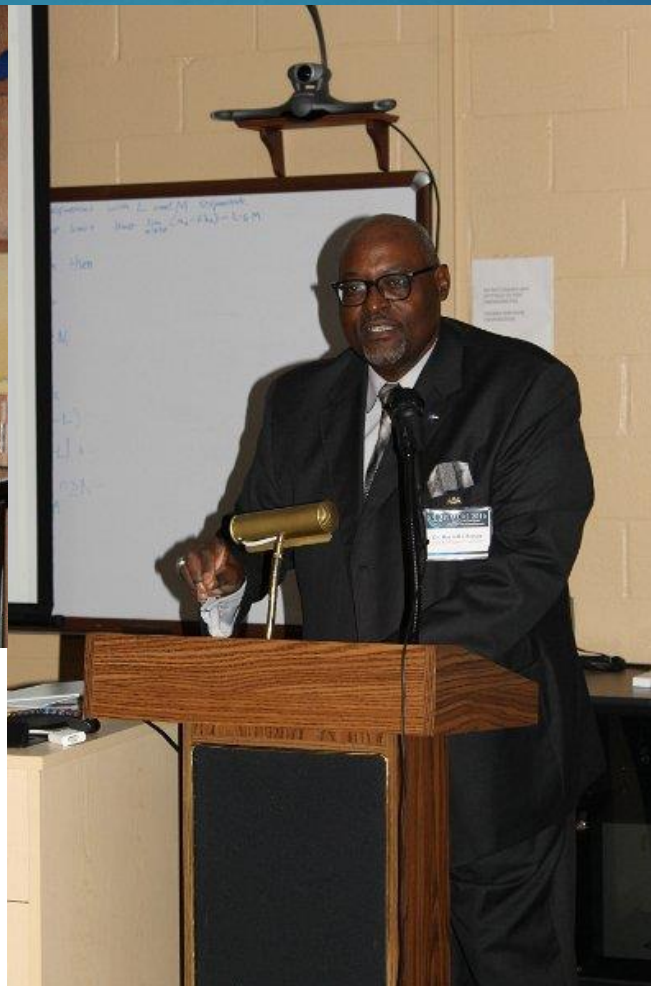
- Student Bags:
 - PiMERS Binder
 - Flashdrive
 - PiMERS Bag
 - PiMERS Pen
- Lesson Plans (Math & Robotics Sessions)
 - Common Core Standards Initiative Guidelines
- LEGO® MINDSTORMS® Robotics Kit
 - NXT 2.0 Software



Researchers



Opening Ceremony



Digital Camera and PowerPoint Training- Mr. Jeff Wood

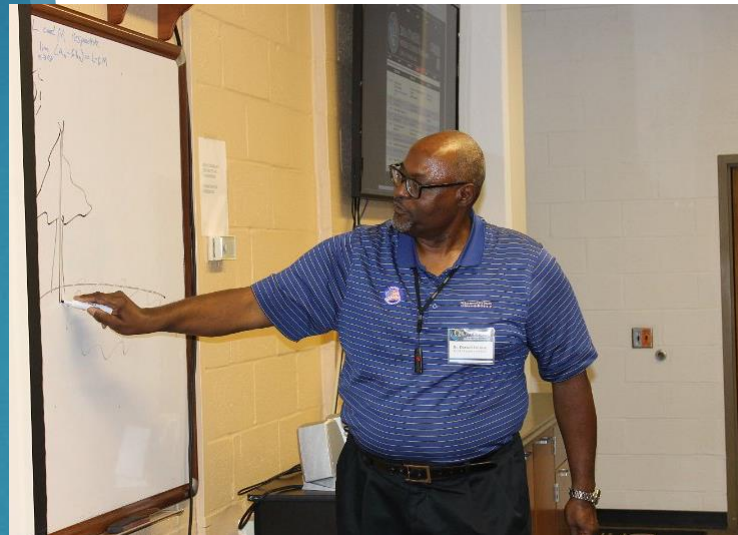


Digital Camera and PowerPoint Training- Mr. Jeff Wood



Math Application Sessions I + II- Math Outreach Team

- Common Core Standards Examination
- Review
- Worksheets



Hydrology Lab- Sheryl Bradford

- Honorary Induction into CSI
- Water Quality Testing
- Alkaline Tablet Test (Lava lamps)



Aviation Technology
Lab- Mr. Orestes
Gooden & Ms.
Dominique Vaughn

- Flight
Simulators
- Air Traffic
Control
Tower
Simulator
- Drones and
UAVs



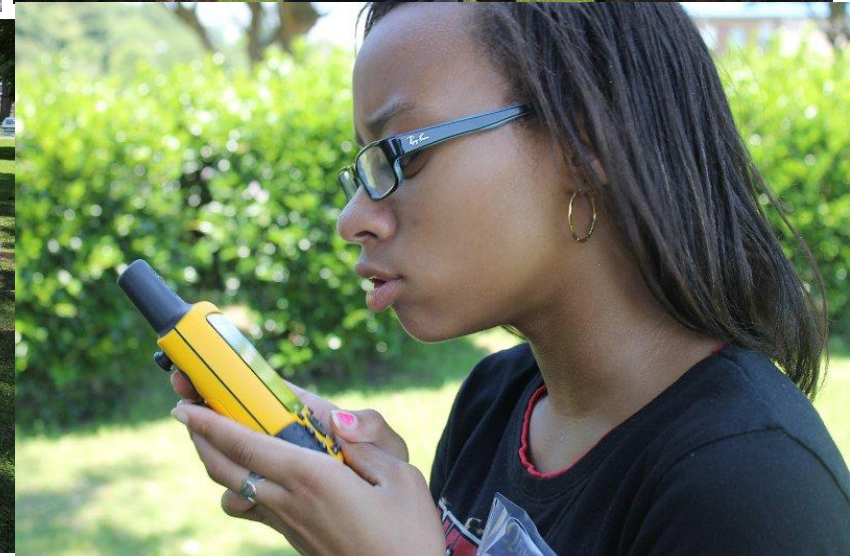
Campus Tour- Mr. Derek Morris and Ms. Steffi Walthall

- Marion D. Thorpe, Sr. Administration building
- Information Technology Center
- Willie and Jacqueline Gilchrist Education and Psychology Complex
- Mickey L. Burnim Fine Arts Center
- Melvyn N. Vonda Reed Riley Wellness Center
- Walter N. and Henrietta B. Ridley Student Complex/University Center



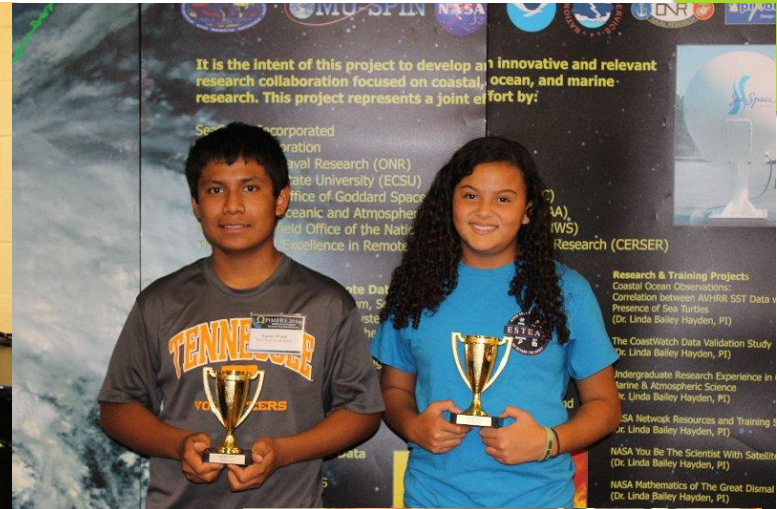
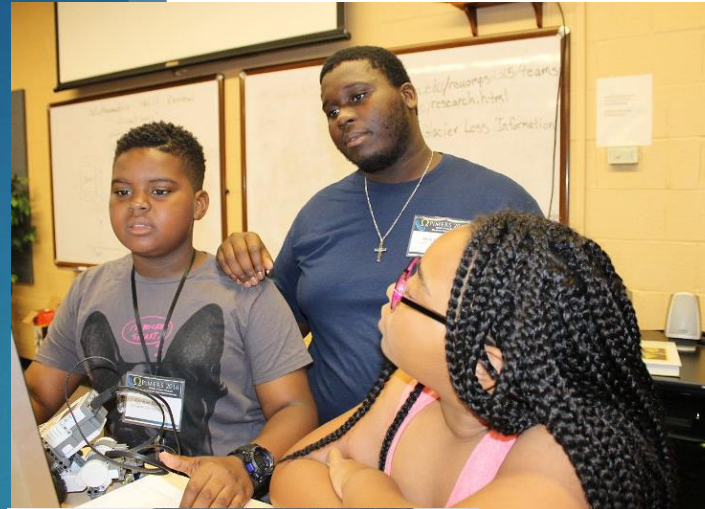
GPS Training- Mr. Cornelius Holness

- GPS Operation
- Learned to plot and find coordinates using GPS



Robotics Sessions I, II, III, + IV

- Assembling the LEGO® MINDSTORMS® Robotics kits
- Programming the LEGO® MINDSTORMS® Robots using NXT 2.0 software
- Obstacle Course



Virginia Air and Space Museum



ECPI- Mr. Frank Gomez

- Engineering Lab
- Hydraulics Lab
- Computer Science Lab
- Cyber Security Lab
- Game Development Lab
- Criminal Justice Lab



Lunch Seminars

- Andrew Brumfield- Remote Sensing & Satellites
- Cornelius Holness- Unmanned Aerial Vehicles
- Derek Morris- Computer Science
- Kevin Benton- Networking and Video Conferencing
- Orestes Gooden- Aviation Technology
- Kamberlin King- Remote Sensing and TeraScan

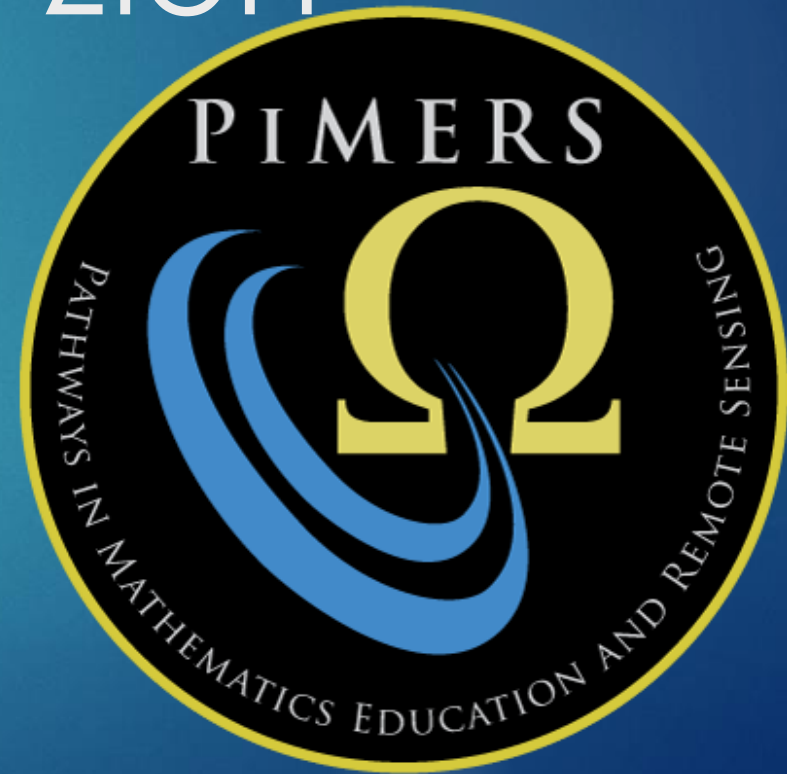


Program Closing

- Opening – Dr. Hayden
- Speakers:
 - Dr. Johnson
 - Savannah Felton – PiMERS researcher
 - Ms. Dana Chandler- parent representative
 - Mr. Roger Hathaway- former Director of Education at NASA
 - Dr. Georges
- Presentation of Stipends



PIMERS Senior Computer Training Camp @ Zion Baptist Church



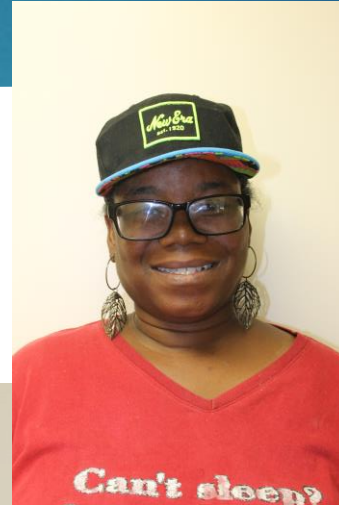
Students



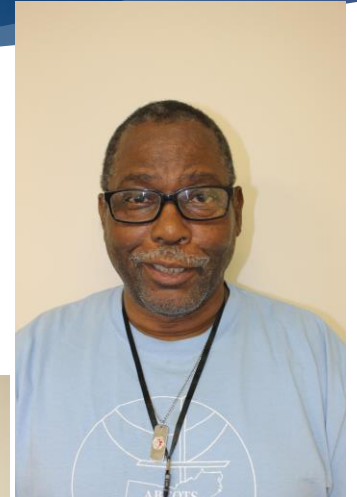
Clarine
Roberts



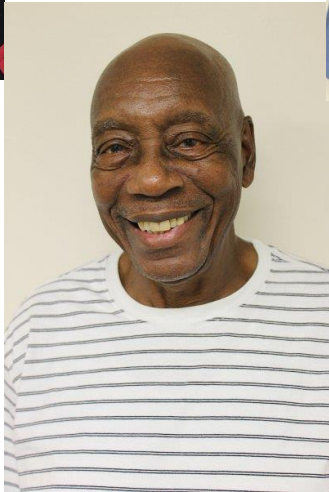
Alphonzo
Harrell



Theresa
Grant



Fletcher
Parker



Dorsey
Chapelle



Margaret
Moore



Mozelle Parker

Materials

- ▶ PiMERS Folder
- ▶ Glossary of Terms and Handouts from National Institute of Aging
- ▶ Flash Drive
- ▶ PiMERS Pen
- ▶ Printed PowerPoint Presentations
- ▶ Benefits of Computers Handouts

Computer Terms (Instructional and Interactive Session)

- Types of Computers
- Operating Computers
- Computer Hardware
- Computer Software



Computer Terms

Computer (CPU)- center processing the brain of computer. CPU interprets and carries program instructions

Lesson Goals

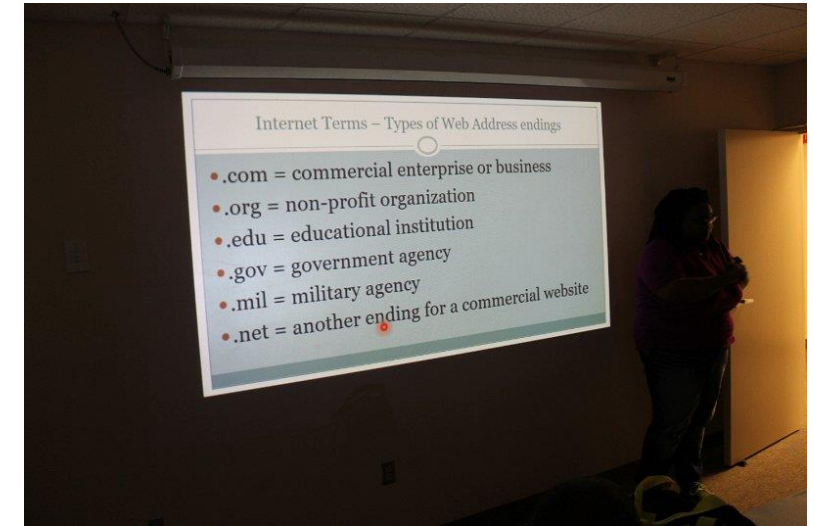
1. Learn
2. Practice

Computer and Internet Basics

COMPUTER AND INTERNET TERMS PART 1

Internet Terms (Instructional & Interactive Sessions)

- Browsers
- Search Engines
- Web Addresses



Internet terms
The Internet- A vast, international collection of computer networks that transfers information. A combination of the words international and network. Websites and e-mail are part of the Internet

Lesson Plan

- Learn Basic Internet Terms
- Learn how to get to a website
- Learn how
- Learn how engine

Computer and Internet Basics

COMPUTER AND INTERNET TERMS PART 2



Smartphones and Tablets (Instructional and Interactive Sessions)

- Types of Smartphones and Tablets
- Anatomy of a Smartphone
- Smartphone functions and software



Lesson Goals

Anatomy of a Smartphone

1. I

Smartphone anatomy

What is a smartphone?
a cellular phone that performs many of the functions of a computer, typically having a touchscreen interface, Internet access, and an operating system capable of running downloaded applications

A SmartPhone

Computer and Internet Basics

SMARTPHONE AND TABLET BASICS



Microsoft Word (Interactive Sessions)

- Opening Word and Creating Document
- Functions of Style Ribbon
- Creating a Resume



PowerPoint (Instructional and Interactive Sessions)

- About Me Presentation
- Basic Functions of PowerPoint
- Presentation tips



Thank You!!!

ABOUT ME

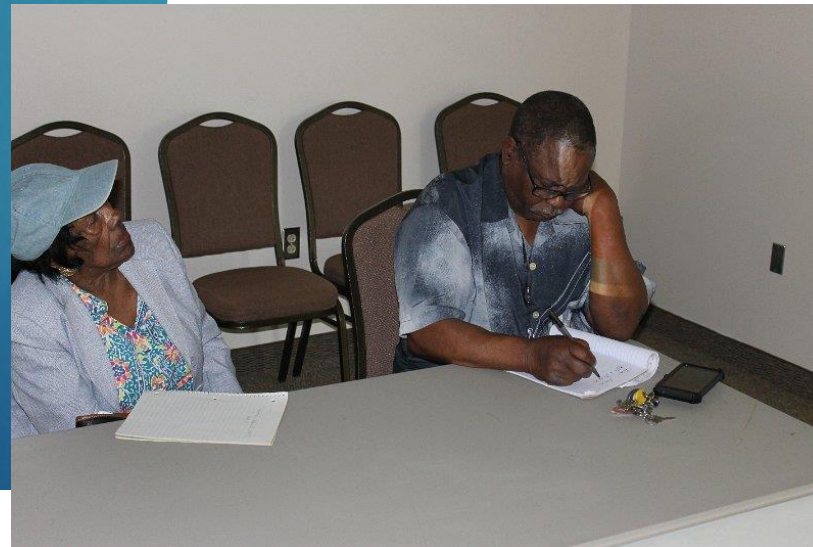
- Date of Birth- September 21st
- Hometown- Chesapeake, Virginia
- Education - Savannah College of Art and Design
 - Major: Interactive Media Development
 - Concentration in Game Development
- Hobbies- Reading, Movies, Painting
- Future Goals- World Development Artist Company



ABOUT ME
STEFFI WALTHALL

Microsoft Excel (Instructional and Interactive Sessions)

- Purpose of Excel
- Operating in Excel
- Spread sheet Creation
 - Budgeting
 - Calculations



Acknowledgements

The 2016 REU Outreach Team would like to thank Dr. Hayden, Dr. Darnell Johnson, Mr. Hayden and the REU program staff and faculty for their guidance and assistance during the span of this program. The Outreach Team would also like to thank Mrs. Debra Jones, Dr. Kelvin Turner, Senior Pastor, and the Zion Baptist Church staff for their continuous assistance during all of the sessions of the PiMERS Senior Computer Training Camp.

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Questions, Comments, & Concerns?

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- ▶ State Board of Education and Department of Public Instruction, (2016, July 23). Standard Course of Study for Mathematics. Retrieved from ACRE: Accountability and Curriculum Reform Effort: <http://www.ncpublicschools.org/docs/acre/standards/math-ela/standards-k-12.pdf>
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