

Destination SPACE

(Satellite Program for Aerospace-Centered Education) and **STEM**

Satellite Week Space Camp

STEM Programs:

3-Phase SmallSat Remote Sensing

Deep-Space CubeSat Project

Amelia Earhart Aviation History Project

L. DeWayne Cecil, Ph.D.

Founder, Destination SPACE

Lauren Ballard, Nesbitt Discovery Academy (NDA)

Emily Brison, NDA

Jordan Miller, NDA

Moriah Miller, NDA

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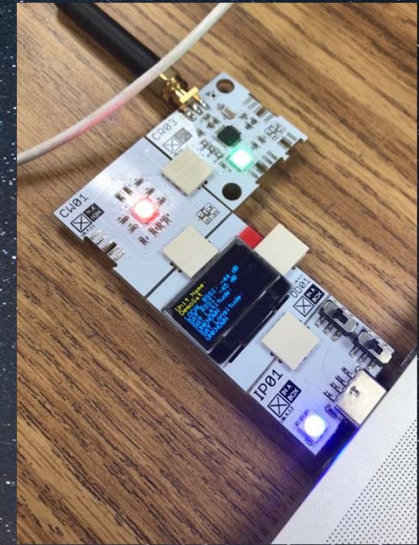
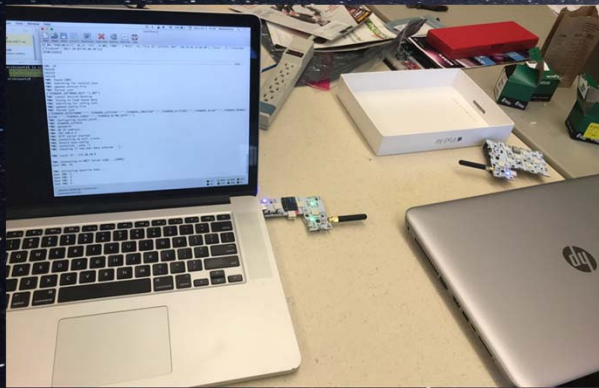
Introduction

Why Destination SPACE

Climatologists and Educators, Aerospace Experience
The Collider - Climate Science and Applications

Why Western North Carolina

NOAA Climate and Weather Center
The Collider - Climate Solutions
Asheville Museum of Science



Why NASA Langley Research Center Service Region

NASA CubeSat Launch
Innovative STEM programs
Destination SPACE Connections



Satellite Week Space Camp

Inaugural Camp - August 14-18, 2017 | Phase 1 SmallSat Program
Satellite Week 2018 – July 22-28

Introduced students to:

- Atmospheric Science, Particularly Weather and Climate
- Remote Sensing, Weather Stations, SmallSats
- Concepts of Calibration and QA/QC
- Teamwork Exercises
- Technical Reporting and Presentations



SmallSat Program - Phase 1-3

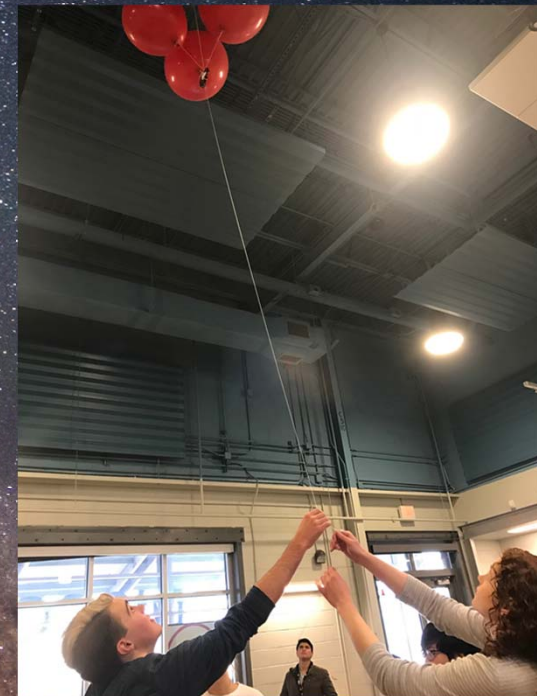
October, 2017 - September, 2018

Student Led Projects

- Teams from STEM Schools in 5-State Area
- Initial remote sensing and applications introduction

Systems Engineering Approach

- Students start engineering project and research
- Teams implement project design
- Project management experience shared amongst team
- Currently informal - Open to input, and Sponsorship

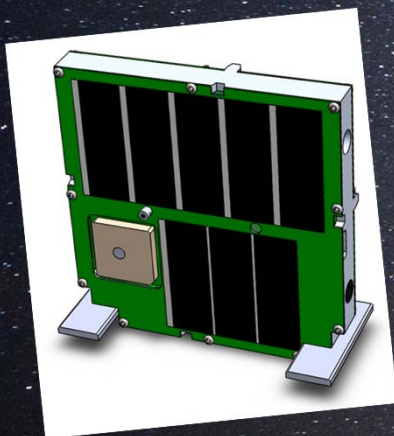


Expansion and Evolution

NASA Langley 5-State Service Region

Deep Space CubeSat Challenge, STEM Mission

Cross-School & State collaboration

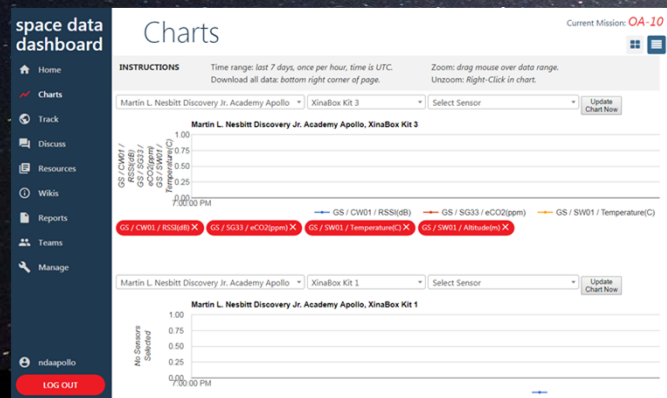


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New Skills for Students

Technical Skills

Remote Sensing Data Applications
Payload/Ground Station Design
Data Analytics
Research Design and Execution
Computer Programming - Arduino Labs
Technical Troubleshooting



Professional Skills

Project Management
Teamwork & Leadership
Presentation Skills
Networking
Working with Experts

Lauren Ballard and Emily Brison, Nesbitt Discovery Academy

Lauren:

Why STEM/NDA; NASA's Space Program Inspiration, Teachers (Mr. Thrasher), Interest in aerospace engineering in 7th and 8th grade

Next Step: Aerospace Engineering, Auburn University, Fall 2018



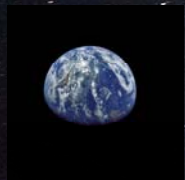
Emily:

Stem makes me feel like part of something bigger

I've always had a passion for learning about the universe

Putting strength in women in STEM carriers

Next Step: Aerospace Engineering, North Carolina State Univ., Fall 2018



Jordan and Moriah Miller, Nesbitt Discovery Academy



Why STEM?

Interested in STEM subjects at a young age: Specifically math and science.

Opportunities and exposure to STEM programs

Serve as STEM Educational Instructors Zaniac Learning & Asheville Schools

Destination SPACE, Satellite Week Space Camp, SmallSAT program

Next Step:

Engineering, Undeclared Intent, North Carolina State Univ., Fall 2018



Collaborators:

- L. DeWayne Cecil, Ph.D., Destination SPACE (DS), Robert Twiggs, Twiggs Space Lab (TSL), Bjarke Gotfredsen, XinaBox, Matt Craft, TSL, Judi Sandrock, XinaBox, Alec Courtright, DS, Annette Hollingshead, DS, Kathy Dooley, DS, and Nesbitt Discovery Academy Students:

Lauren Ballard, Jessica Benitez, Emily Brison, Michael Byrd, Courtney Fullbright, Austin Gleydura, Megan Lemmons, Jordan Miller, Moriah Miller, Isabel Novak, Sarah Palko, Travis Walter, and Emma Whitney

Destination SPACE-STEM; destinationspace-stem.org

