Building Environmental and Educational Technology 
Competence and Leadership Among Educators: An Exploration 
in Virtual Reality Professional Development

BEE-Tech Project Leadership Team

PI: Dr. Nastassia N. Jones
Co-PI: Dr. Christopher Chappell
Co-PI: Dr. Christopher Guillory
Co-PI: Dr. Emily Jackson-Osagie
Co-PI: Dr. Harold Mellieon
Senior Personnel: Dr. Francesca Mellieon-Williams
Support Staff: Ms. Reshonda Corley
Graduate RA: Aaron Gauff

BEE-Tech Advisory Board
Dr. Antonino Cucchiara
Dr. Tiffany Flowers
Dr. Craig A. Mertler
Dr. Amanda Rosenzweig

BEE-Tech External Evaluator: Youngblood & Associates, LLC
Marta Youngblood
Terrence Youngblood

This project is funded by the National Science Foundation, grant # 2010563. Any opinions, findings, and conclusions or recommendations expressed in these materials are those of the author(s) and do not necessarily reflect the views of the National Science Foundation.
Project Goals
What are the experiences of secondary STEM teachers in rural and urban schools who participate in the multiyear BEE-Tech PD program?

Using Partnerships & Effective PD tenants

Summer Training
- 2-week blended learning institute
- 2 Cohorts of 10 teachers over 3 years

Academic Year Support
- 4 PD meetings
- Monthly Critical Friends Group meeting
- Classroom visits/observations
- Virtual AR Community

7 Characteristics of Effective PD
1. Content-focused
2. Incorporates active learning
3. Supports collaboration in job-embedded context
4. Uses models of effective practice
5. Provides coaching & expert support
6. Opportunity for feedback & reflection
7. Sustained duration
(Darling-Hammond, Hyler & Gardner, 2017)

FOR Teacher Impact
- Self-efficacy and engagement
- Instructional practices
- Technological pedagogical and content knowledge (TPACK)
- Professional growth and development