

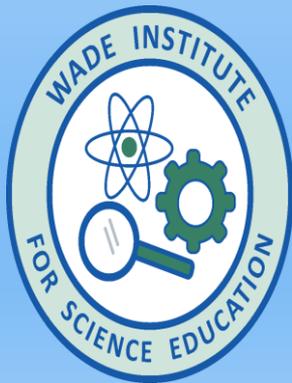
# Creating Sustainable Partnerships with Schools: Innovative Extensions to Your Professional Learning

Sandi Ryack-Bell, Wade Institute for Science Education

Angela Damery, Wade Institute for Science Education

Audra Chapleski, Space Foundation

Heather Norton, Discovery Place





**THE SPACE FOUNDATION IS BUILDING THE NEXT GENERATION OF SPACE LEADERS AND IMPROVING THE OVERALL QUALITY OF EDUCATION THROUGH TEACHER, STUDENT AND COMMUNITY PROGRAMS USING HANDS ON and IMMERSIVE SPACE CURRICULUM TO IMPROVE STUDENTS' INTEREST AND SKILLS IN SCIENCE, TECHNOLOGY, ENGINEERING, ARTS, AND MATHEMATICS (STEAM).**

# Space Foundation

## Teacher Professional Development Opportunities

- **Space Across the Curriculum Programs (SAC)**
- **Space in the Community Programs (SITC)**
- **Teacher Liaison Program (TL)**
- **Virtual Outreach (VO)**
  
- **Donations, Grants, and General Contributions support the programming**
  - **Private Donors**
  - **Corporate Donors**
  - **Grants/Foundation Giving**
  
- **This year received approximately \$5M**
  
- **Directly serve over 500 teachers annually and growing!**



- 10 licensed teachers providing trainings (SES)
- Teacher Professional Development provided on site or virtually/remotely
- 1 day to 1-2 week long intensives
- Serve school districts teachers globally
- Hands on and Immersive lesson plans
- Innovative, career workforce development driven content
- Curriculum support and development
- Teach students then teach teachers (SITC)
- Summer programming and camps (ESE) supported by TL's



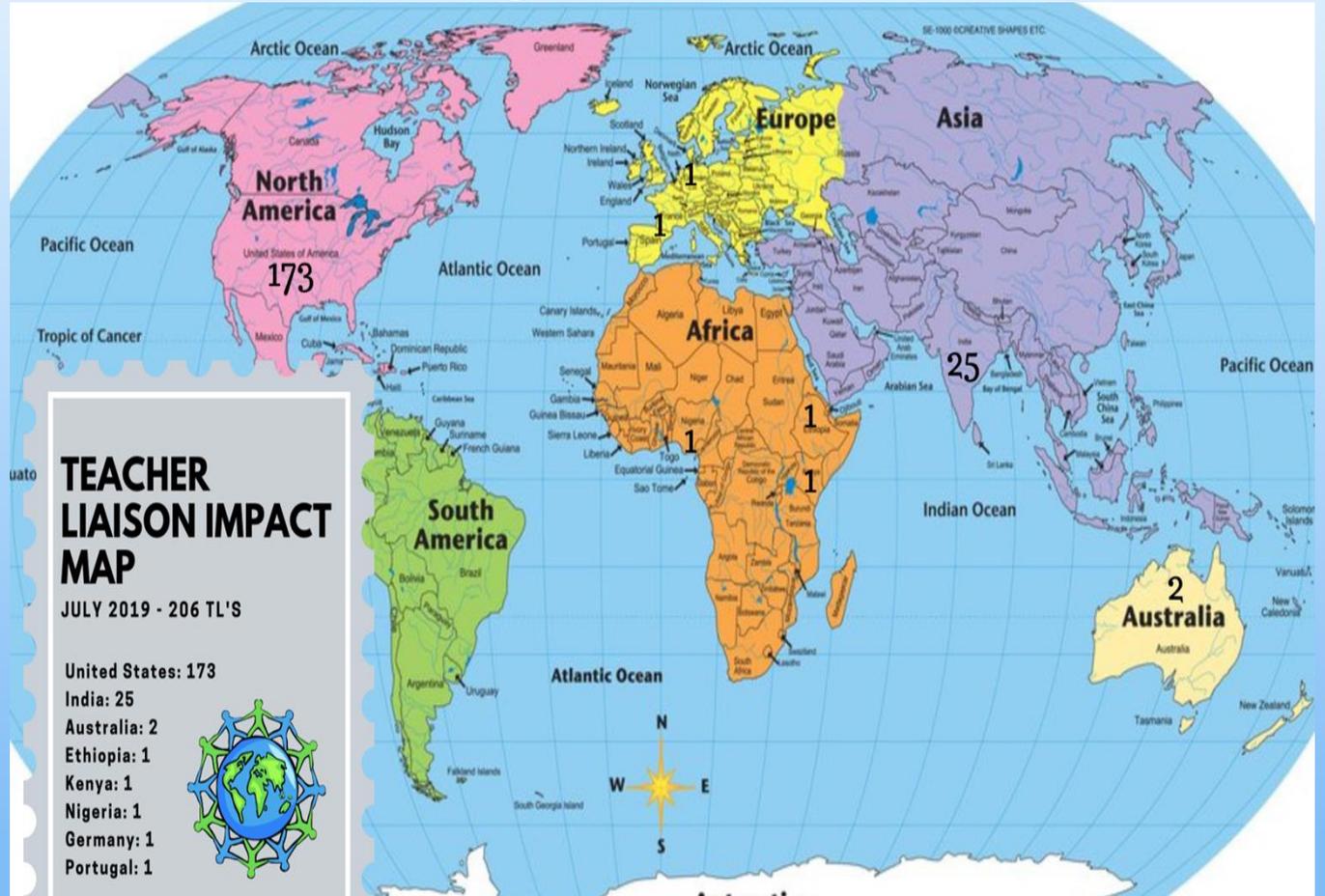
**Space Foundation**

**Space Across  
the Curriculum**

**Space in the  
Community**



# Space Foundation's Teacher Liaison Program



- Highly selective cadre of teachers
- First “dibs” on scholarships, First to learn, First to experience
  - Private event invitation
- Website/Facebook/Social Media/Grants



# Discovery Place Education Studio



Discovery Place, Inc. currently operates four hands-on Museums: Discovery Place, Charlotte Nature Museum, Discovery Place KIDS - Huntersville and Discovery Place KIDS-Rockingham.

In 2014 opened Discovery Place Education Studio.

We offer professional development in the form of whole group workshops, individual coaching, school/district consultation services, and resources.

The Studio has served over 15,000 teachers since opening.

Located  
adjacent to  
Discovery Place  
in Uptown  
Charlotte





**DISCOVERY PLACE**

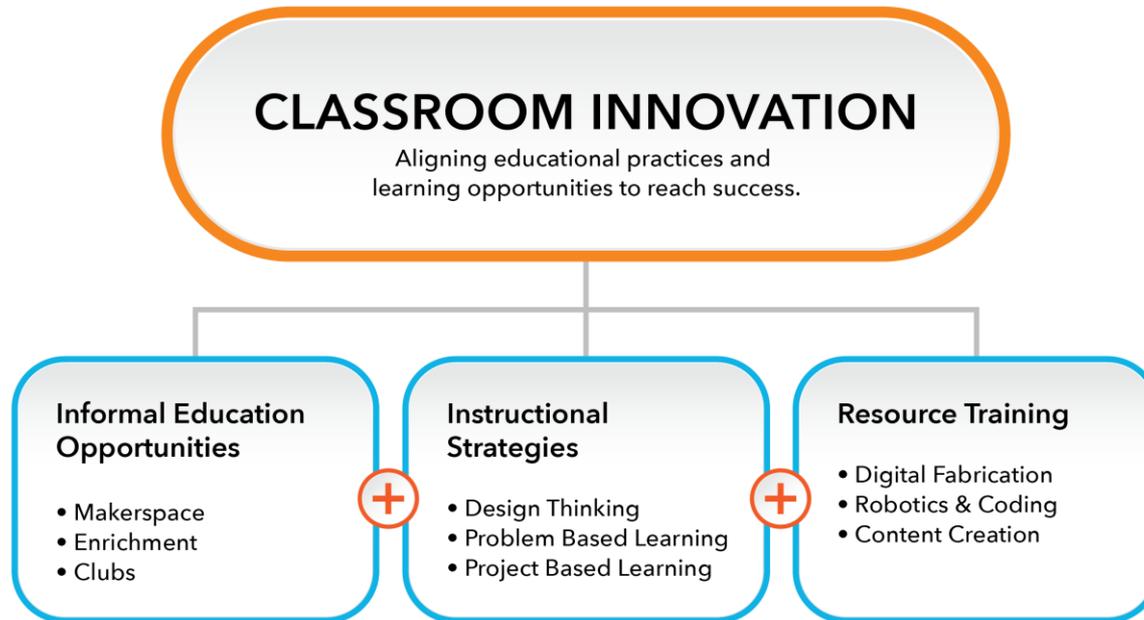
SCIENCE | KIDS | NATURE

Five guiding principles are at the heart of our vision for the Education Studio and form the basis for all programs and experiences:

- We recognize educators as leaders
- Build meaningful partnerships with schools
- Deliver minds on, hands in experiences
- Collaboration with the community
- Build a culture of STEM for the school and/or district



# Model





**DISCOVERY PLACE**  
SCIENCE | KIDS | NATURE

# Project Based Learning

School or District Level Vision Setting

PBL Framework Training

Coaching

Specific Standard-Based PBL Development



**DISCOVERY PLACE**  
SCIENCE | KIDS | NATURE

# Charlotte Mecklenburg Magnet Schools

Winget Park  
Elementary





**DISCOVERY PLACE**  
SCIENCE | KIDS | NATURE

**Administrative Team Vision Setting**

**STEM Instructional Strategies Trainings**

**STEM Coaching and Consultation Support**



**DISCOVERY PLACE**  
SCIENCE | KIDS | NATURE

# Make and Design Thinking

Makerspace Vision Setting

Maker Technology Acquisition and Training

Design Thinking Integration

“Pop Up” Makerspace Engagements



**DISCOVERY PLACE**  
SCIENCE | KIDS | NATURE

# ORISE Design Thinking Intensive

2 Day session in  
Chicago





**DISCOVERY PLACE**  
SCIENCE | KIDS | NATURE

**Built on research and  
documentation from The d.School  
@ Stanford, IDEO, and Jake  
Knapp's SPRINT**

**Human Centered Design Cycle**

**Creative Thinking Overview**





**DISCOVERY PLACE**

SCIENCE | KIDS | NATURE

# Supporting School Districts: Collaborations and Partnership

NC STEM School Designation

Gear Up!

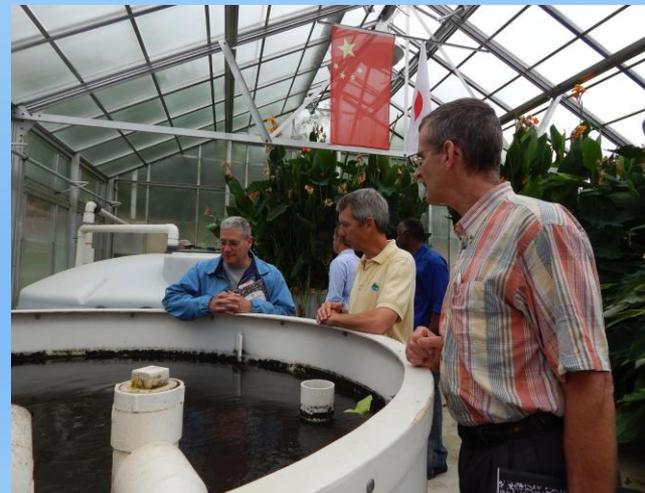
Florence County, South Carolina

Partnerships with Universities: Appalachian State, Friday Institute at NC State, UNCC

# Thank You

# The Wade Institute for Science Education is

A consortium of museums, nature centers, cultural institutions, institutions of higher education, STEM business and industries, research and development centers, science centers and other organizations whose missions include science and STEM education.

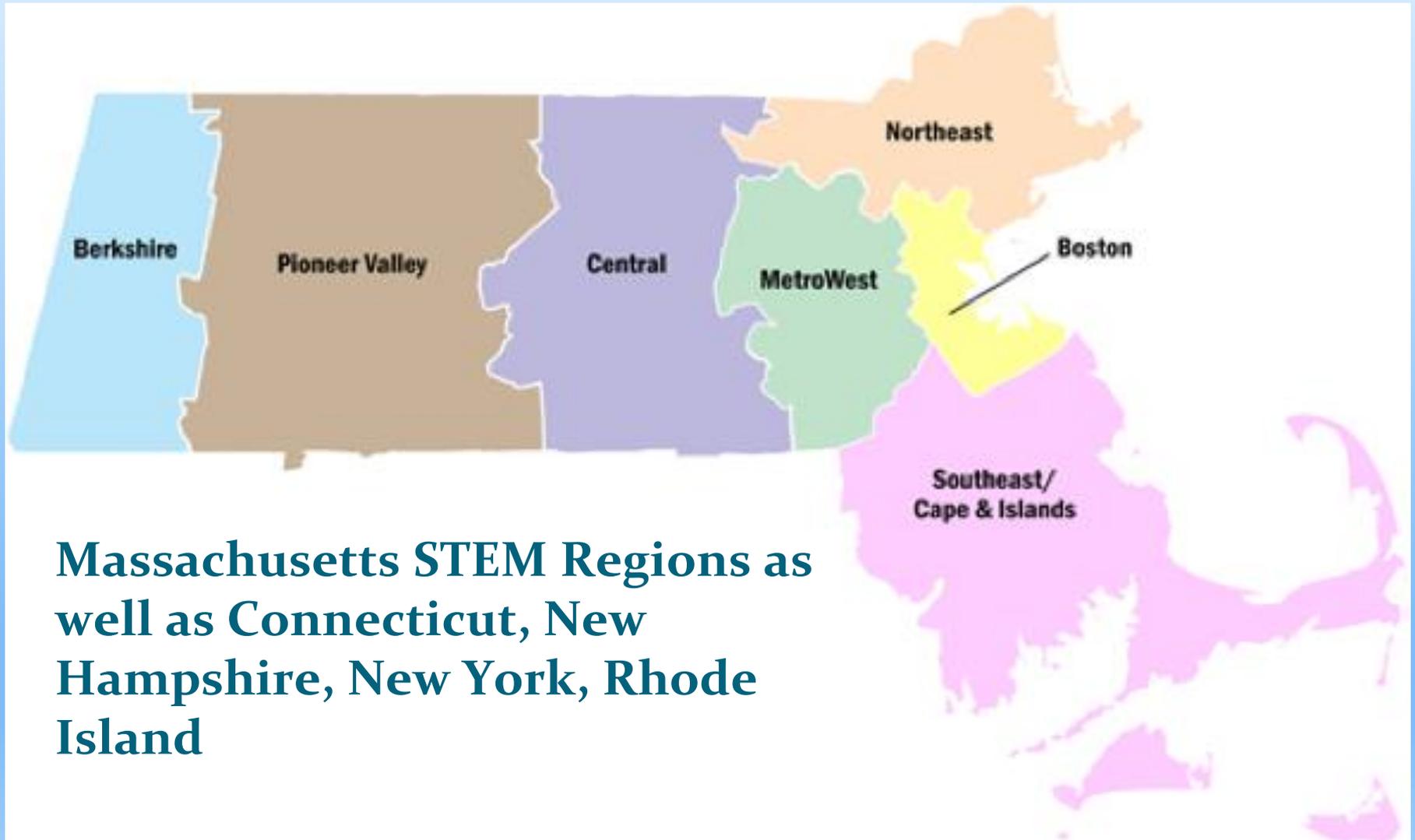


# Our Model

We bring together collaborations of these institutions and organizations to develop regional and state-wide professional development programs. We provide the administrative support, funding and pedagogy components of the programs.



# Our Geographic Reach



**Massachusetts STEM Regions as well as Connecticut, New Hampshire, New York, Rhode Island**

# Our Programs

*Professional  
Development  
Institutes for grade  
3-12 educators*

*Customized  
Professional  
Learning Services*

*Focus Workshops*



# The Wade Institute's Professional Development Programs

- Include both content and methodology
- Promote hands-on, minds-on, inquiry-based pedagogy
- Engage teachers in instructional practices that support learning
- Connect to classroom practice and include supports
- Incorporate the Science and Engineering Design Practices and learning progressions
- Provide models for adapting materials and using them to teach effectively
- Create opportunities for teachers to share/network/work collaboratively
- Share local and regional resources for teachers and classrooms





- Provide opportunities to reflect on learning
- Allow participants move between roles as “adult learners” and that of “teachers”
- Provide continued support during and after PD sessions such as classroom modeling, creating Professional Learning Communities and coaching
- Recognize that teachers have different backgrounds and learning needs
- Include discussion of what participants experienced and the implications for their own classrooms
- Offer PDPs and graduate credit



# Professional Development Institutes . . .



Engage teachers in an exciting professional development experience that leads to their understanding of and comfort with using inquiry-based, hands-on, minds-on pedagogy to teach STEM activities in their classrooms. They include one-week, hybrid, and two-week graduate courses during which teachers work with educators from 3-5 collaborating institutions, experiencing inquiry learning, exploring local resources, and expanding their science content knowledge. The institutes are followed up with call-back sessions, sharing of participant-developed investigations, and services provided by the partner organizations such as classroom modeling and coaching.

# Customized Professional Learning Services

Customized professional learning programs are tailored to the needs of schools and school districts. Programs bring science content and educational expertise directly to schools and school districts and include multiple contact points.



These programs reinforce school-based initiatives to strengthen students' science learning and are done on a contractual basis. They often include classroom modeling, coaching, on-line work between on-site sessions or developing PLCs within the school/school district.

# Focus Workshops

Focus workshops are 2-day professional learning opportunities that provide a deep dive into content and inquiry with investigations focusing on one stem discipline. These workshops are offered in collaboration with 1 or more partner institutions. Follow up with teachers includes in-school programs during which educators from the partner institutions model inquiry investigations in the classroom or model field studies for students.



# SMALL GROUP DISCUSSION

What did you hear that you liked most?

What questions do you have about these models? Do you see any problems that you'd like to discuss?

Do you have anything to share from your own experience or professional practice that would add to the conversation?

# Contact Information

**Sandi Ryack-Bell**

**Executive Director**

**Wade Institute for Science  
Education**

**Quincy, MA**

**617-328-1515**

**[sryackbell@wadeinstitutema.org](mailto:sryackbell@wadeinstitutema.org)**



**Angela Damery**

**Wade Institute for Science  
Education**

**Director of Education**

**Quincy, MA**

**617-328-1515**

**[adamery@wadeinstitutema.org](mailto:adamery@wadeinstitutema.org)**



**Audra Chapleski**

**Space Foundation**

**Director-Education**

**Colorado Springs, Colorado**

**#719-362-8192**

**[achapleski@spacefoundati  
on.org](mailto:achapleski@spacefoundation.org)**



**Heather Norton**

**Discovery Place**

**Vice President, Learning  
Experiences**

**Charlotte, North Carolina**

**407-718-3310**

**[hnorton@discoveryplace.org](mailto:hnorton@discoveryplace.org)**