PEAS

Preschool Education in Applied Sciences

SEPA SCIENCE EDUCATION PARTNERSHIP AWARD
SUPPORTED BY THE NATIONAL INSTITUTES OF HEALTH

INNOVATION

The proposed project will expand the SEPA's reach into preschool learning environments.

o Impacting the Future STEM and Health Science Workforce by **"Bridging the Gap"** Between Preschool and K-12 Learning Environments

o Facilitate Kindergarten Readiness through **Scientific Language Development**

o Teaching Teachers *How to Teach Developmentally Appropriate* Inquiry-based Science within the context of healthy living

o **Diversifying the STEM Pipeline** Early in Life

With SEPA's support, our interdisciplinary team will use innovative approaches to address critical "leaks" in the structural integrity of our nation's STEM pipeline.

APPROACH

Specific Aim 1: Develop, implement, and evaluate the PEAS Teaching Guide, an innovative guide for Head Start teachers focused on integrative, inquiry-based learning in the Life Sciences that will: (1) **build teacher science teaching** knowledge, science teaching interest, and science teaching efficacy; and (2) **improve children's science knowledge and development of language**.

Figure 1. Preschool Cycle of Science Discovery

Specific Aim 2: Create the **NIH SEPA PEAS Institute for Early Childhood Teachers** focused on building science teaching knowledge, science teaching interest, and science teaching efficacy among Head Start teachers serving URM children (3-5 years) living in rural NC.

Specific Aim 3: Establish an early **STEM Network** of teachers, administrators, program faculty, and community partners within and between NC-based Head Start programs.
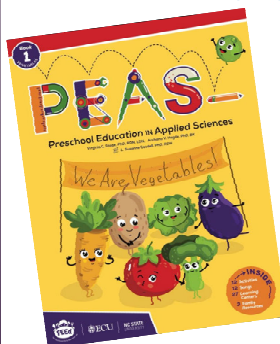
Figure 2. PEAS Teaching Guide Mock Cover Art

PARTNERS

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o **External Evaluator:** Sebastian Diaz, PhD Diaz Consulting

o **Head Start Program Partners**

IMPACT

o Over the course of the program, we will impact over **350 teachers and 3,400 children** with hands-on, inquiry-based science learning, with thousands of additional children reached as teachers continue implementing the PEAS approach in subsequent years.

o Further, strengthening the preschool educator workforce will improve the quality of early STEM experiences, **"bridge the gap" between preschool and K-12 learning environments**, advance the field by serving as a model for future programs, and ultimately feeding the STEM pipeline.
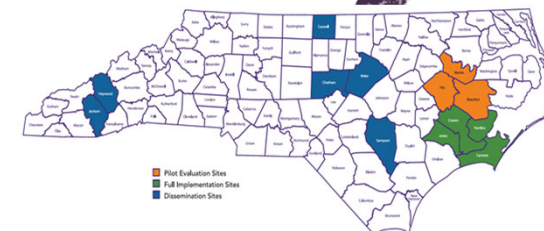

Figure 3. Pilot, Implementation, and Dissemination Counties for PEAS Program Activities

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