LASERS (Literacy and Academic Success for English Learners through Science)

Supporting STEM Learning for Young Children

Partnership for Early Education Research (PEER) Conference
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Presenters

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Video Activity: Science and Language

- **Context**: A Pre-K teacher from the Hartford area uses the natural environment to engage her students and facilitate learning science

- **Focus for viewing**: Note the science concepts and the language being used by the teacher and children
Turn & Talk

- What did you see?
  - Science learning
  - Language used

- Why does it matter?

Goals of LASerS

**Overarching Goal**

- Improved literacy and academic outcomes for English Learners (ELs) in Hartford

**Short and Long term Goals**

- Integrated program of supports for ELs, across contexts, grades, and content domains
- Increased system-wide capacity
- Model and recommendations for state-wide scale up

**Key Components**

- Professional Development plan for Teachers
- PD and Supports for Coaches
- Family Supports
- Leadership Alliance

Timeline

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<th>Academic Year</th>
<th>2015-2016</th>
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<td>PreK Development</td>
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Component 1: Professional Development for Teachers

- Pre-K through grade 1 teachers from participating Hartford schools
- Instructional sessions and online resources
- Coaching

Engage-Explore-Reflect Cycle

Sample Materials
Component 2: PD and Supports for Coaches

Face-to-face PD Coaching protocols
Virtual coach supports including:
• Webcasts
• Webinars
• Resource library

Goals for Coaching Teachers Around Science:
• Build a collaborative relationship with the same teacher or group of teachers over an extended period of time
• Provoke teachers’ own thinking about children and how they learn science concepts and skills
• Support teacher reflection on the effectiveness of their own science-teaching practices
• Collect, use, and share documentation of science teaching and coaching to support collaborative reflection for children, teachers, coaches, and instructors
• Model the types of interactions and guidance you want teachers to provide for children

Video Activity: Teacher Questions about Planting with Children

• Context: LASERs professional development specialists developed this video to demonstrate and discuss how to engage children in planting without using soil
• Focus for viewing: Note how inquiry-based science can be used to investigate plants

https://www.youtube.com/watch?v=FzoVhI4n01E
**Turn & Talk**

How do planting experiences:
- Engage children in science inquiry?
- Support children’s learning about the characteristics and needs of plants?

**Component 3: Family Supports**

- Home activities & science-literacy kits
- School-based family nights
- Summer family events at Connecticut Science Center (CSC)

**Goals for EL Families:**

- Be informed about children’s school science explorations and the LASErS project
- Facilitate literacy-integrated science activities and conversations at home that connect to children’s school explorations
- Engage in school-based family science events
- Participate in a summer family event at the CSC and utilize the CSC family guide as a resource
- Understand their important role in supporting children’s science, language, and literacy learning
Community-Based Activities:
Harnessing the Combined Power of School & Home

With the assistance of the Connecticut Science Center, events will be hosted at:
- Family Life Education
  (30 Arbor Street #102, Hartford, CT)
- Catholic Charities El Centro Family Center
  (43 Wadsworth Street, Hartford, CT)
These events will take place in May and June 2016.

Component 4: Leadership Alliance

Key LASERs staff, state and district leaders, and EL literacy experts support LASERs’ sustainability and make recommendations for statewide scale up
- Receive updates during development
- Provide input
- Plan for knowledge transfer
- Identify lessons learned

Organizations Represented
- Annenberg Institute for School Reform
- Boston College
- Capitol Region Education Council
- Connecticut Science Center
- Connecticut State Department of Education
- Edward Zigler Center in Child Development & Social Policy, Yale Child Study Center
- Hartford Foundation for Public Giving
- Hartford Public Schools
Lessons Learned: PD for Teachers

Year 1 Summary
• Successful delivery
• Attendance Issues
• Variable Implementation

Year 2 Modifications
➢ Gradual introduction of content
➢ Debriefing with HPS
➢ School site visits
➢ More scaffolding for implementation
➢ For K, integration with HPS Literacy Guide
Lessons Learned: Coach Training

Year 1 Summary
• Supports through PD
• Variable Implementation

Year 2 Modifications
- Co-instructors to “shadow” coaches
- Status of online component unclear
- One coaching cycle between sessions

Lessons Learned: Family Supports

Year 1 Summary
• Home activities & science-literacy kits
• School-based family nights
• Summer family event at CSC
Lessons Learned: Family Supports

Year 1 Summary
• Supports through activities and events
• Variable Implementation

Year 2 Modifications
➢ Number of school-based events modified
➢ Teacher flexibility for scheduling events (day or night)
➢ CBO-based events planned and scheduled

Refining the LASERs Model

Goal 2: Build capacity for supporting young English language learners by fostering the integration of literacy and science learning across school, home, and community contexts.

Thanks!