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**Lessons Learned & Insights Gained**

* Children are motivated and interested in spatial orientation learning activities; yet careful activity development is required to teach spatial concepts to preschoolers.
* An Augmented Reality (AR) spatial orientation app is engaging to preschool, yet this new technology requires an iterative, design-based approach to ensure it is developmentally appropriate and feasible to integrate into classrooms.

Teaching preschoolers about spatial orientation with hands-on materials, books, and digital resources is a promising approach to foster STEM learning.

**New Challenges & Next Steps**

* Restarting in-person data collection to test the classroom activities and hands-on child assessment tasks despite new visitor protocols/limitations and teacher hesitation to participate.
* Next steps include a larger classroom-based comparison study.

**Equity**

* Leveraging hand-held technology to create an augmented reality experience for young children.
* Co-designing and partnering with teachers and parents to create learning activities (classrooms and home-based), a digital teachers guide, digital family guide, and augmented reality app to foster spatial orientation learning.

**Transforming Preschoolers’ Spatial Orientation: Leveraging New Technologies for Learning in Early Childhood Classrooms and at Home**

Ashley Lewis Presser & Ms. Jillian Orr

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Project type:​ Developing and Testing Innovations

Project 2022 Video Showcase: <https://stemforall2022.videohall.com/presentations/2550>

Project Overview: [Brief overview of project idea/objectives/goals, “one breath introduction” to your project]