

FRANKLIN HEAD START & EARLY HEAD START +
AIMS CENTER FOR MATH & SCIENCE EDUCATION

PARTNERSHIP ANNUAL REPORT 2021-22



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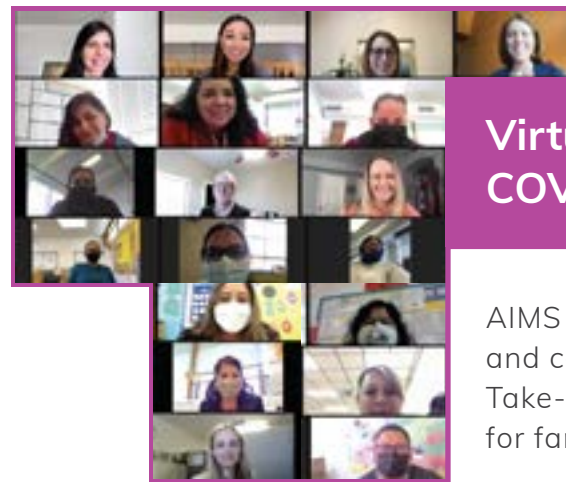
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PARTNERSHIP OVERVIEW

2015

Partnership Begins

Began work with two Head Start center-based sites: Madison and Jefferson



Virtual STEM Support During the COVID-19 Pandemic

AIMS continued virtual professional learning and coaching support for teaching staff. Take-home kits were added to the resources for family engagement.

Community Maker Faire

The AIMS team collaborated with the Franklin Head Start staff to host a community Maker Faire.

2022

JUNE 2022

2019

STEM with Franklin Head Start and Early Head Start

To enhance young children's STEM education through classroom learning, home interactions, and community engagement.

OCTOBER 2019

2020

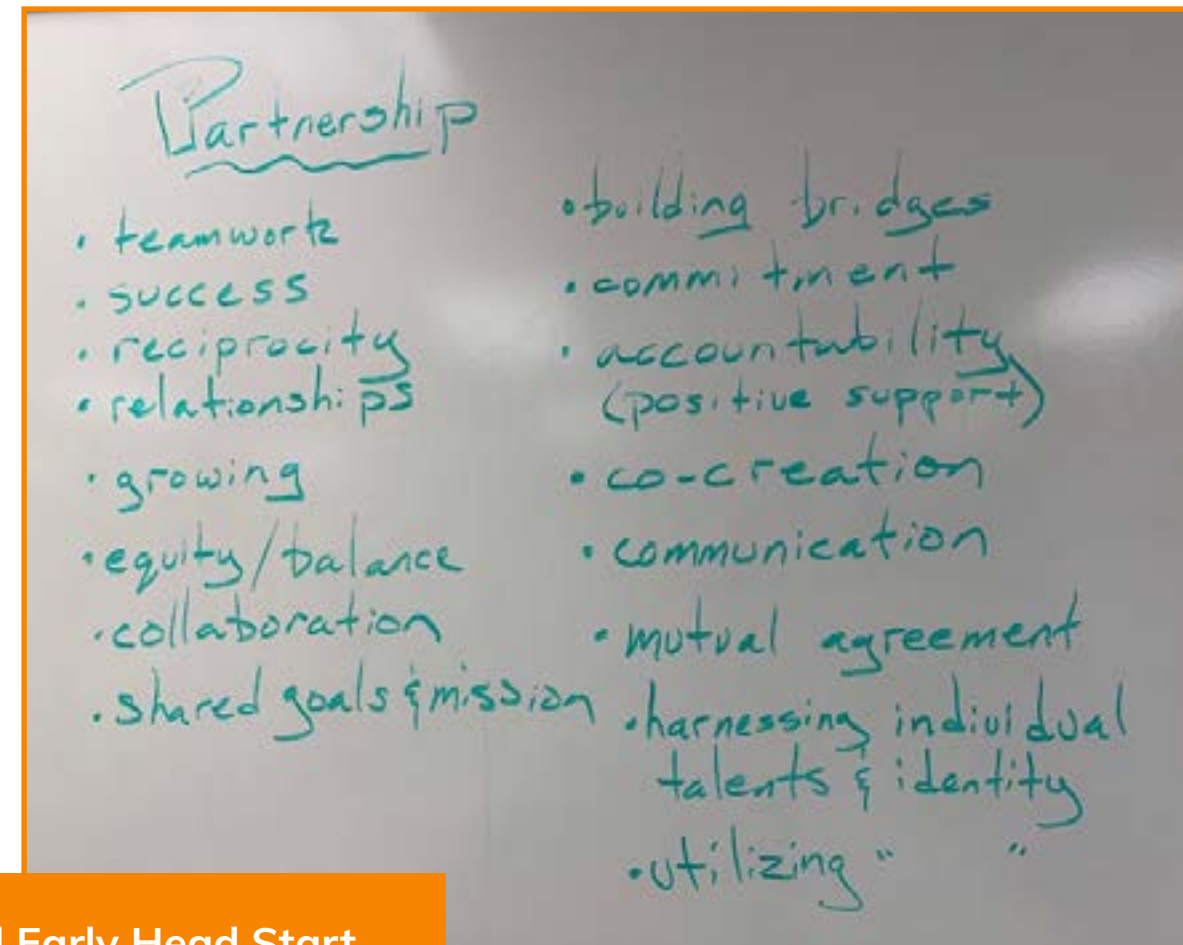
Community Maker Faire

Over 150 children and family members attended the first Franklin Head Start community Maker Faire.

2021

Franklin and Early Head Start Partnership Continues

Professional development, coaching, and take-home kits continue through the 2021-22 academic year.



Our partnership has been centered around a set of values that originated as a group brainstorm in one of our initial meetings.

PROFESSIONAL LEARNING



Teachers working collaboratively to form a geometric shape with a stretchy band.

Each Professional Learning Session helped to develop teachers as Learners of STEAM, Teachers of STEAM and Observers of children’s STEAM. The professional learning experiences that took place during each 2-hour session engaged teachers in STEAM learning and challenged them to look forward with new innovative techniques to create STEAM learning experiences for children. In each session, teachers were encouraged to reflect on their own experiences and how these could shape their work with young children.

Each session emphasized the importance of an embodied approach to learning, allowing the teachers to experience the activities themselves while exploring ways to facilitate them with their students. One teacher expressed that the “hands on experience of how children can react or (what they might) need when the activities are done” was the most helpful aspect of the sessions. Another teacher stated how they appreciated the active and creative nature of the professional learning experience.

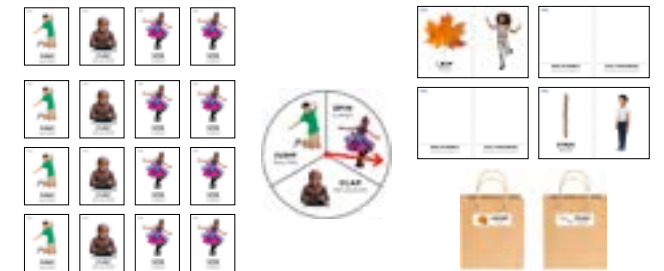


Head Start teachers explore how games can facilitate STEAM learning by working collaboratively to get the ping pong ball in the hole.

MODULES

In 2021-2022 our partnership focused on playful ways children experience STEAM learning in their everyday environments. Modules engaged teachers and children in exploring:

- PATTERNS
- SPATIAL COMMUNICATION
- MOVEMENT
- GAMES
- SIMPLE MACHINES



PATTERNS

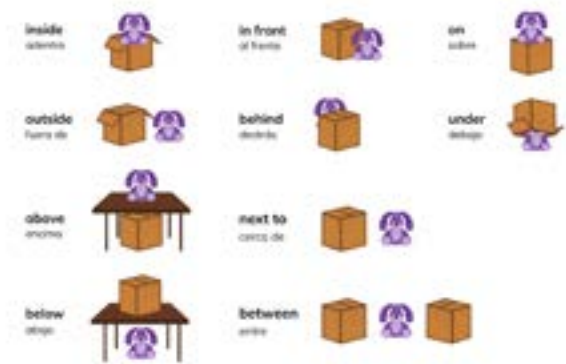
- Where do you see patterns?
- Can you make a pattern?
- What kinds of patterns can you make?
- Can you finish a pattern?
- Can you tell what the pattern is?
- Can you extend a pattern?

DRDP

- Cog 6: Patterning
- Cog 9: Inquiry through Observation and Investigation
- PD-HLTH 1: Perceptual-Motor Skills and Movement Concepts
- VPA 1: Visual Art
- VPA 2: Music
- VPA 4: Dance

Sample Activity

Participants explored sound, visual and movement patterns by rotating through three centers.



SPATIAL COMMUNICATION

- When and how do people use spatial communication?
- What goals do we have when we use spatial communication?
- What can you use to aid in spatial communication?
- Can you visualize objects and move them in your mind?
- Can you give the same directions in multiple modes?
- How can your body help you communicate spatially?

DRDP

- **Cog 1:** Spatial Relationships
- **Cog 9:** Inquiry through Observation and Investigation
- **PD-HLTH 2:** Gross Locomotor Movement Skills
- **PD-HLTH 3:** Gross Motor Manipulative Skills
- **VPA 4:** Dance

Sample Activity

Teachers worked in small groups to give directions to an AIMS coordinator on the Franklin campus to get from one location to another.

MOVEMENT

- How do people move their bodies?
- What goals do we have when we move our bodies?
- What else moves?

DRDP

- **Cog 1:** Spatial Relationships
- **Cog 9:** Inquiry through Observation and Investigation
- **PD-HLTH 1:** Perceptual-Motor Skills and Movement Concepts
- **PD-HLTH 2:** Gross Locomotor Movement Skills
- **PD-HLTH 3:** Gross Motor Manipulative Skills
- **VPA 4:** Dance

Sample Activity

Participants explored movement through several activities including working in a group to make a geometric shape with a stretchy band, directing a partner where to go using tiles on the floor as a grid, interactive yoga, and brainstorming favorite movement songs.



GAMES

- Types of games - individual, goal oriented, competition, teamwork/cooperative
- Monitoring count and movement
- Skills taught by board games
- Attention to rules of a game and making up new rules

DRDP

- **Cog 1:** Spatial Relationships
- **Cog 3:** Number Sense of Quantity
- **Cog 4:** Number Sense of Math Operations
- **Cog 6:** Patterning
- **Cog 9:** Inquiry through Observation and Investigation
- **PD-HLTH 1:** Perceptual-Motor Skills and Movement Concepts

Sample Activity

Teachers explored different versions of the game hopscotch from around the world.

SIMPLE MACHINES

- How do robots and other simple machines work?

DRDP

- **Cog 1:** Spatial Relationships
- **Cog 3:** Number Sense of Quantity
- **Cog 4:** Number Sense of Math Operations
- **Cog 6:** Patterning
- **Cog 9:** Inquiry through Observation and Investigation
- **PD-HLTH 1:** Perceptual-Motor Skills and Movement Concepts

Sample Activity

Each classroom received a Hexbug kit and three Matata Lab Coding Kits which are now available for classrooms to check out and provide coding experiences for students.



COACHING

Each classroom received the added support of coaching to implement ideas and content from their learning. Classrooms were assigned a coach that would support planning and integrating activities as well as be available for questions. Coaches would make at least one classroom visit to observe the implementation of one activity and offer feedback. At the end of each professional learning experience, teachers made appointments with an assigned coach and decided on what activity they would like to try from the current module theme.

CLASSROOM VISITS

On the day/time agreed coaches would make classroom visits. Teachers and teacher assistants would decide which person would lead an activity for the observation. If requested, coaches would model the activity before or during an observation.

FEEDBACK

The coaching relationship was not evaluative but instead built on the idea of transparency and mutual respect. Coaches would share feedback from observations based on what they noticed children doing and saying. Focusing on children's learning was central in reflection discussions. The coaching relationship sought to foster trust and hold a safe space so that teachers could be vulnerable as they learn and apply new ideas. Classroom staff were encouraged to feel free to ask questions, share ideas, and discuss challenges.



TAKE-HOME KITS

This year every student received five AIMS Take-Home Kits. The kits were created to correspond with the Modules for Professional Learning and provided a rich opportunity for a classroom connection to the home. The kits playfully engaged children in STEAM learning while being simple enough for parents to use. Materials were selected with the purposeful intent of being simple, inexpensive, and interchangeable to show that learning arises from what children do with the materials- relying on their natural curiosity and creativity- and not necessarily the materials alone. Five new kit collections were introduced in 2021-22:

- Patterns
- Spatial Communication
- Movement
- Games
- Simple Machines

Along with the kits for students to take home, each classroom received a Hexbug kit. Also, three Matata Lab Robotic Kits are now available for classrooms to check out and provide coding experiences for students.



A teacher experiencing the Feed the Monster game in the Movement take-home kit.



The Frog Splash games were a real hit with students. They hopped their frog across a pond as they experienced counting, one to one correspondence, as well as spatial reasoning in the board game version of Frog Splash.

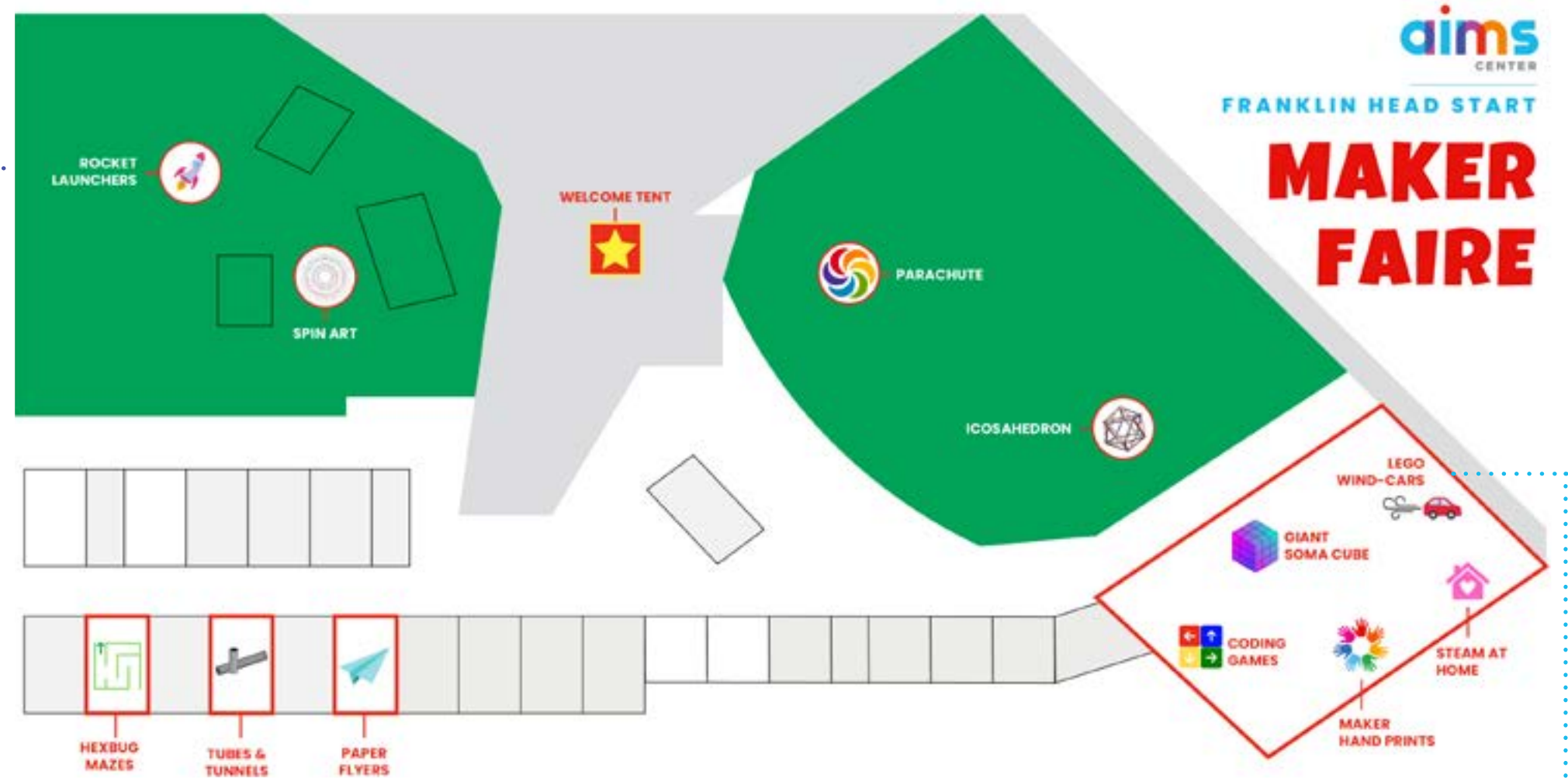
In the embodied version they created their own frog headband and hopped from lily pad to lily pad as they used spatial language such as forward and backward, up and down, higher and lower, etc.

Game take-home kit contents included:

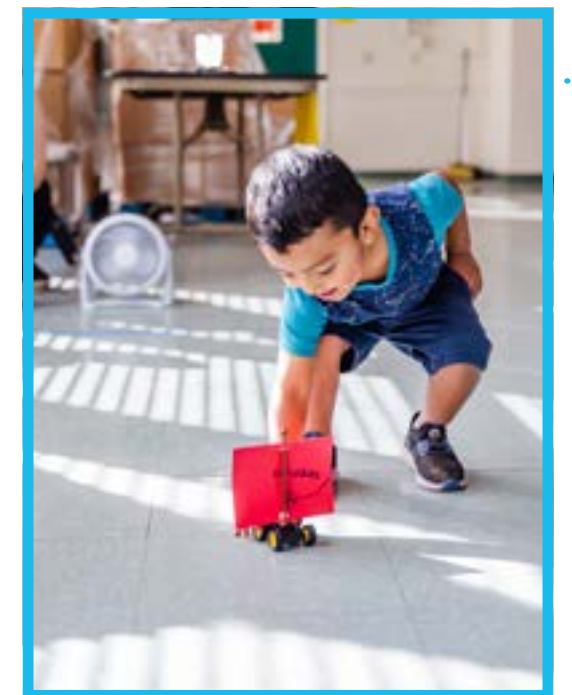
- 4 Frog Splash game boards
- 4 toy frogs
- 4 lily pads
- 3 spinners
- 1 frog headband craft.

MAKER FAIRE

Our second ever Maker Faire at Franklin was held on June 7th from 4:00 pm - 7:00 pm at Franklin Head Start. During the April 20 professional learning session, teachers had time to reflect on the first Maker Faire held in October of 2019 and sign up to facilitate an activity. The AIMS team collaborated with the Franklin Head Start staff to gather materials needed for activities and created a map directing families to the location of the activities. Each activity was marked off after they were completed and families could turn in the map at the end of the evening for a raffle prize. A taco truck provided dinner for the families and staff.



A favorite activity was making and launching paper rockets on the grass area next to the cafeteria. Families made paper rockets using a straw as a template and then were able to launch them using a stomp launcher. Children had a great time trying out different iterations of their rockets. They launched them from different places on the lawn and made predictions before they launched on where their rocket would land.



2021-22 OUTCOMES

WHAT IMPACTS HAVE HEAD START STAFF EXPERIENCED?

- Increased confidence as STEM learners and teachers.
- More variety of classroom STEM activities.
- Fostered home and community connections.
- Applied personal learnings to improve teaching.

TEACHER REFLECTIONS →



Teachers create a paper chain to reflect on their learning during the year.

Q: What was most valuable about the project?

A: The time you spent explaining it to us, and not just giving us a to do list. So like getting to fully experience the whole aspect of the activity, the hands-on, like us doing it.

Q: What have you learned through this project?

A: I learned a lot because we don't know as adults how the minds of children are, and that taught us we have to step back and we have to think and know how we would word things to make it easier for a child to understand at their level.

Q: How have you changed as a teacher?

A: I think as a teacher I would go through the motions, and we're doing it, and we're hoping they get the concept. But once we understand what we're doing and why we're doing it, it makes it a lot easier for the kids to get it because we're not just doing it like robots.

MOVING FORWARD

In 2022-23 the Franklin Head Start, Early Head Start, and AIMS Center for Math and Science Education partnership will focus on the following strategic areas:



DEEPEN EXPERTISE
in STEM & STEAM for
young learners



DEVELOP NEW RESOURCES
for classroom and home
learning



INCORPORATE INNOVATIONS
both low-tech and
high-tech



EXPAND OPPORTUNITIES
for family and community
engagement



BROADEN PARTNERSHIP
to include new Head
Start centers

ACKNOWLEDGEMENTS

The success of this partnership is due to the hard work and dedication of many people. We would like to acknowledge and thank the following individuals and groups for their willingness to grow, adapt, and thrive as they serve the children of this Head Start community:



Franklin and Early Head Start's dedicated staff

of teachers, teacher assistants, and support team. Their daily commitment to providing innovative, quality learning experiences for students is commendable.

Rosa Pineda, Helen Uyeda, Aletria Snowden & Ralph Carrillo

whose leadership helps provide the resources and avenues necessary for innovative teaching and learning.

Franklin and Early Head Start families

including all parents, care-givers and children. They have been wonderful in implementing take-home kits, providing feedback, carrying classroom learning into their homes, and overall being the heart and soul of this partnership.

The AIMS Center for Math and Science Education team

of leaders, coordinators, and support staff, including our Research Fellow Hannah Smith.



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