



Math and science are virtually
nonexistent
in pre-K classrooms.

We're flipping the curriculum.



Implementation Fidelity Tools, Strategies, and Priorities for Connect4Learning (C4L): AGENDA

- Importance of implementation fidelity monitoring
- Key elements of implementation fidelity
- Unique aspects of C4L that are important to monitor for implementation fidelity
- C4L tools to help with implementation fidelity monitoring

Why Implementation Fidelity Monitoring?

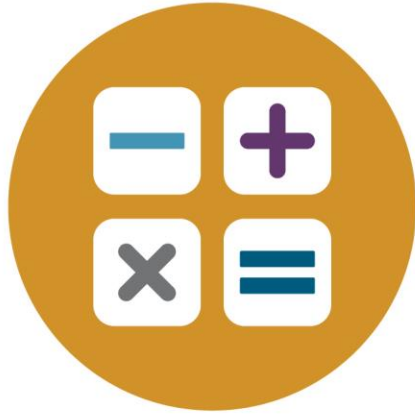
- Big investment, want to get the most from it
- Sense of accountability at all levels
- Student outcomes depend on it (along with consistency, frequency, and intensity of curriculum use, and level of student AND teach engagement and positive energy)
- Essential for effective RTI system and results
- C4L was designed as it is for VERY GOOD, EVIDENCE-BASED REASONS, so trust it
- Human “drift” tendencies

What are Key Elements of Implementation Fidelity Monitoring?

- Student engagement
- Program specificity – unique attributes that cause learning gains relative to other curricula
- Adherence to planned instructional sequence and activities
- Exposure and duration
- Quality of delivery
- Opportunities for open communication, feedback, collaboration, and professional development



Most preschool classrooms only spend 58 seconds on math instruction per day



Early math predicts later school success better than almost anything else²



Less than 5% of time in preschool involves planned science³



Science teaching interactions are rare and of low quality⁴



Children are present in science areas 15% of the time during free play⁵

Why
Connect4Learning®?

Cue
Connect4Learning®



Research-led and Classroom-tested

Connect4Learning® was developed through funding and support from the **National Science Foundation**.

The curriculum is a **research-based, interdisciplinary approach** to prekindergarten learning.



Grant awarded in first round of competition

A team of
nationally recognized academic experts
saw these stats and knew there was a better way.



**Julie
Sarama, PhD**
University of Denver
MATHEMATICS



**Kimberly
Brenneman,
PhD**
Heising-Simons
Foundation
SCIENCE



**Douglas
H. Clements, PhD**
University of Denver
MATHEMATICS



**Nell
K. Duke, EdD**
University of Michigan
LITERACY



**Mary Louise
Hemmeter, PhD**
Vanderbilt University
SOCIAL-EMOTIONAL
DEVELOPMENT

Key Curriculum Aspects

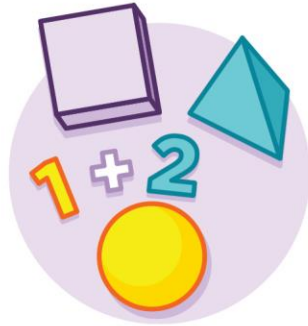


The Interdisciplinary Approach

Connect4Learning[®] weaves together all **four domains** to ensure each subject is addressed **meaningfully** and **comprehensively** with each child.



**Connected
Science
Experiences**



**Engaging
Math**



**Authentic
Literacy**



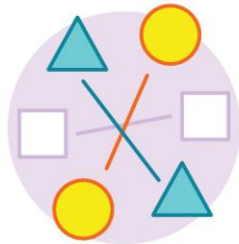
**Social-
Emotional
Development**

Connect4Learning: 21st Century Skills

Six curriculum units support children's development of ten comprehensive thinking processes.



Cooperating



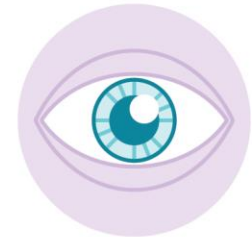
Comparing and Classifying



Communicating and Representing



Reasoning and Problem Solving



Observing



Using Tools Strategically



Making Sense



Persisting, Attending, and Self-Regulation



Curiosity



Creating, Imagining, and Innovating

General Methods of Implementation Fidelity Monitoring

- Teacher self-report
- Observations
- Teacher activity logs, lesson plans
- Student portfolios

Specific Tools for Implementation Fidelity Monitoring with C4L

- Observation Checklist
- Formative Assessment Data
- Student Portfolios

Implementation Fidelity for Learning Centers



Connect4Learning Learning Centers	Yes	No	Comments
Art Center			
Book Nook			
Computer Center			
Construction Zone			
Dramatic Play			
Exploration Station			
Games and Puzzles Center			
Listening Center			
Show What You Know Center			
Enhancements for the current unit are included in learning centers			

Implementation Fidelity for Learning Visuals

Connect4Learning Visuals	Yes	No	Comments
Daily schedule posted			
Schedule includes separate times for Welcome and Read-Aloud, Fast Focus, and Connect			
Schedule includes learning-center time (minimum 45 minutes, or more if required by state)			
Schedule includes small-group time, typically conducted during learning-center time			

Implementation Fidelity for Learning Visuals

Connect4Learning Visuals	Yes	No	Comments
Alphabet chart posted			
Expectations visuals posted			
Friendship-skills visuals posted			
Problem-solving visuals posted (introduced in Unit 2)			
Solution Suitcase posted (introduced in Unit 2)			
Think-pair-share visuals posted			
Classroom materials, shelves, and learning centers labelled for access and understanding			
Computer Center sign-up sheet posted			
Connect4Learning children's books are available in various learning centers			
Unit-specific visuals, including those made by children, posted			

Implementation Fidelity for Teaching Methods

Connect4Learning Teaching Methods	Yes	No	Comments
Teaching methods evident			
Teacher and children are using manipulatives in meaningful ways			
Teacher introduces, models, or demonstrates new activities or materials			

Implementation Fidelity for Teaching Methods

Connect4Learning Teaching Methods	Yes	No	Comments
Teacher asks, "How do you know?" to promote children's thinking about their own thinking			
Teacher asks open-ended questions and follows with information and/or a second open-ended question to engage in meaningful conversation			
Teacher uses Solution Suitcase strategies to help children solve social conflict			
Teacher uses think-pair-share technique in whole-group situations			
Teacher encourages children to use their science journals as intended			
Teacher uses the curriculum puppets, Lila, Conrad, and Tucker, as relevant and when suggested in the unit manuals			
Class work on the unit project is evident			

Implementation Fidelity for Instructional Activities

Connect4Learning Instructional Activities	Yes	No	Comments
Lessons are occurring in the classroom			
Teacher follows narrative guidance for lessons			
All necessary materials were gathered/ prepared ahead of time			

Implementation Fidelity for Instructional Activities



Connect4Learning Instructional Activities	Yes	No	Comments
Teacher appears familiar with the lesson before beginning			
Welcome and Read-Aloud			
Teacher introduces the text			
Teacher reads the text			
Teacher uses lesson information for "After Reading" discussion			
If relevant, teacher uses think-pair-share visuals: cards and/or poster			
Teacher uses voice (pace, volume, inflection) and enthusiasm to engage children in whole-group lesson			
Children are attentive and engaged throughout (lesson should not be more than 20 minutes)			

Implementation Fidelity for Instructional Activities

Connect			
Teacher uses Connect time to introduce or review concepts from small-group time			
Connect time is a whole-group time separate from Welcome and Read-Aloud or Fast Focus			
Teacher uses voice (pace, volume, inflection) and enthusiasm to engage children in whole-group lesson			
Children are attentive and engaged throughout (lesson should not be more than 20 minutes)			

Implementation Fidelity for Instructional Activities

Connect4Learning Instructional Activities	Yes	No	Comments
Small Group			
Lesson includes a maximum of five children			
Lesson occurs in a space with minimal distractions			
Teacher follows lesson narrative			
Teacher conducts formative assessment(s) during lesson			
Children are attentive and engaged throughout (lesson should not be more than 15 minutes)			
Teacher has prepared materials in the Show What You Know center, so children can continue working on small-group lesson			
If Day 5, teacher uses small-group time to work with children who missed a lesson, or to repeat lesson for children who need additional support			

Implementation Fidelity for Instructional Activities

Fast Focus			
Teacher conducts Fast Focus lesson in an area with space for safe movement			
Fast Focus is a whole-group time separate from Welcome and Read-Aloud or Connect			
Teacher uses Fast Focus time to reinforce the day's learning and instruct according to the day's lesson			
Children are attentive and engaged throughout (lessons should not be more than 15 minutes)			

Look Inside: Formative Assessment

Connect4Learning® incorporates formative assessment as a regular part of daily Small Group lessons, where teachers interact one-on-one with children and are able to closely observe each child. Small group lessons with literacy learning objectives use the literacy formative assessment sheet, rather than a lesson-specific worksheet.

Small Group Formative Assessment Connect4Learning: Pre-K Science

Unit 2, Week 3, Day 4
Don't Throw That Away!

Checkpoint:
• Children will engage in creative and flexible thinking about and discuss new uses for objects and materials.

Child is able to envision new uses for old things

Child's Name	Yes with ease	Yes with help	No has difficulty	Notes
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

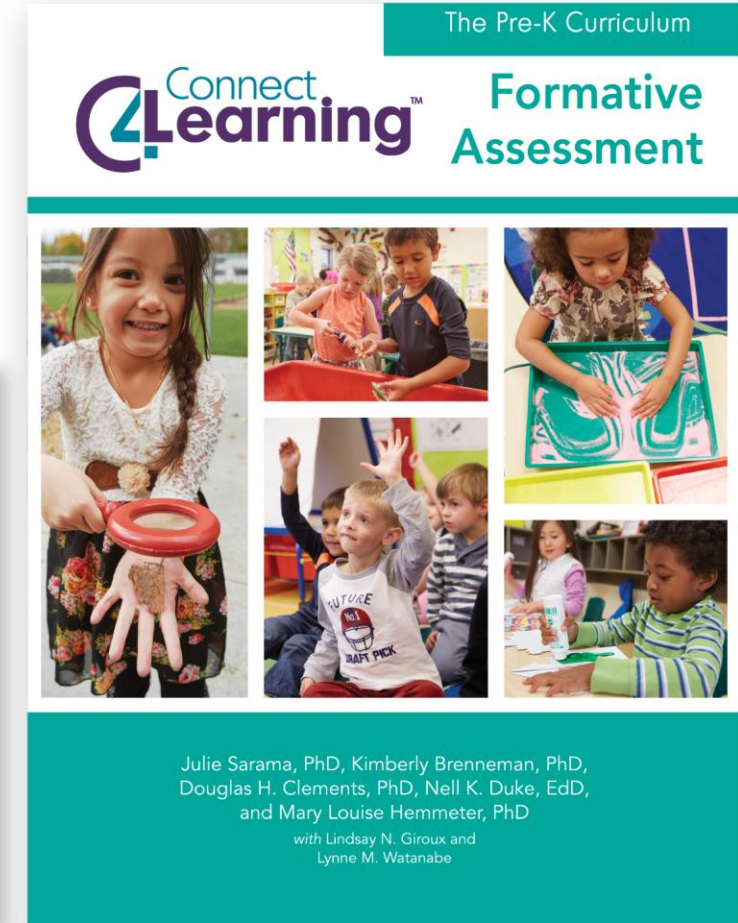
Small Group Formative Assessment Connect4Learning: Pre-K Math

Unit 2, Week 3, Day 2
Get that Number!

Checkpoint:
• Children will develop and demonstrate an understanding of one-to-one correspondence.

Child identifies correct # of objects for 1-1 correspondence

Child's Name	Yes with ease	Yes with help	No has difficulty	Notes
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				



↪ Available online, too!

Curriculum
Components

C4L Online Portal

- <https://platform.connect4learning.com>

Thank you!



Laura Bailet, PhD

lbaillet@kaplanco.com

Chief Academic Officer, Kaplan Early Learning Company

References

- <https://eclkc.ohs.acf.hhs.gov/sites/default/files/pdf/1025-curriculum-fidelity-handout.pdf>
- https://rti4success.org/sites/default/files/FidelityImplementation_10-20-09_FINAL.pdf

Connections Between CLASS and C4L

- Crosswalk available upon request
- Many C4L elements directly support effective implementation of CLASS dimensions across multiple domains
- May be especially effective in improving scores in the Instructional Support domain