The Revolution of Technology in Teaching Structure

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Solon City Schools

Math Coordinator
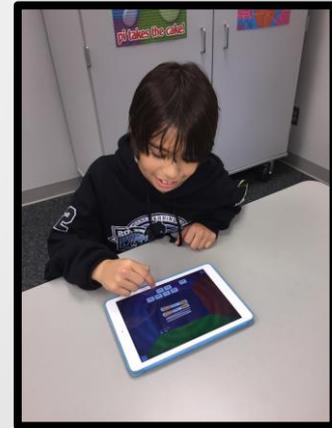
Digging into Structure

-Correlation of iPad apps to Common Core Fluency Standards

-Targeted learning goals with student expectations (norms)

-Purposeful play with technology

-Tools for technological enhancement

-Guided Access restrictions

-Participant partner activity

Common Core Fluency Standards

Grade	Standard	Required Fluency
K	K.OA.1, K.OA.3, K.OA.5	add/subtract within 5
1	1.OA.1, 1.OA.2, 1.OA.6	add/subtract within 10
2	2.OA.2	add/subtract within 20

National Governors Association Center for Best Practices & Council of Chief State School Officers. (2010). *Common Core State Standards for Mathematics.* Washington, DC: Authors.

The Revolution of Technology for CCSSM Fluency

Working Toward K.OA.1	Working Toward K.OA.5	Working Toward K.OA.3	Working Toward 1.OA.6	Working Toward 1.OA.1 and 1.OA.2	Working Toward 2.OA.2
Arithmaroo Compose to 5 App Level: 1 $.99		Arithmaroo Compose to 10 App Level: 2 $.99		Arithmaroo Compose to 20 App Level: 3 $.99	
Find Sums Compose/Decompose 5 App Level: Apple Mode	Find Sums Compose/Decompose 5 App Level: Part Whole Mode	Find Sums Compose/Decompose 6-10 App Level: Apple Mode	Find Sums Compose/Decompose 6-10 App Level: Part Whole Mode	Find Sums Compose/Decompose 11-20 App Level: Apple Mode	Find Sums Compose/Decompose 11-20 App Level: Part Whole Mode
Tens Frame Snap Compose to 5 App Level: Pairs 1-5 Add sum of 5		Tens Frame Snap Add/Subt to 10 App Level: Pairs 5-10 Add sum of 10 Difference-all options			
Hungry Guppy Compose to 5 App Level: Dots or Mixed $3.99	Hungry Guppy Compose to 5 App Level: Numbers $3.99				
Hungry Fish Compose to 5 With Finger Norm App Level: 2,3 $1.99	Hungry Fish Compose to 5 App Level: 2,3 $1.99	Hungry Fish Compose to 10 With Finger Norm App Level: 4-8 $1.99	Hungry Fish Compose to 10 App Level: 4-8 $1.99		Hungry Fish Compose to 20 App Level: 9-11 $1.99
		10 Frame Fill Compose 10 App Options: Sequential or Random Fill Show Equation			

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Working Toward K.OA.1	Working Toward K.OA.5	Working Toward K.OA.3	Working Toward 1.OA.6	Working Toward 1.OA.1 and 1.OA.2	Working Toward 2.OA.2
MathGirl Addition Compose to 5 App Level: 1 $.99		MathGirl Addition Compose to 10 App level: 2-5 $.99		MathGirl Addition Compose to 20 App level: 6-10 $.99	
		Math Slide Basic Facts Compose/Decompose to 10 App Level: Game 1	Math Slide Basic Facts Compose/Decompose to 10 App Level: Game 2, 3, 6	Math Slide Basic Facts Compose/Decompose to 20 App Level: Game 4	Math Slide Basic Facts Compose/Decompose to 20 App Level: Game 5, 7, 8, 9,10
		Math Slide 100 Compose/Decompose to 10 App Level: Game 1 $1.99		Math Slide 100 Compose/Decompose to 20 App Level: Game 3, images/numbers to 20 $1.99	Math Slide 100 Compose/Decompose to 20 App Level: Game 2, 10 plus w/numbers Game 4, 10 plus w/numbers $1.99
Word Problems Compose/Decompose to 5 App Levels: Add/Subt with chips $.99	Word Problems Compose/Decompose to 5 App Levels: Add/Subt without chips $.99	Word Problems Compose/Decompose to 10 App Levels: Add/Subt with chips $.99	Word Problems Compose/Decompose to 10 App Levels: Add/Subt without chips $.99	Word Problems Compose/Decompose to 20 App Levels: Add/Subt with chips $.99	Word Problems Compose/Decompose to 20 App Levels: Add/Subt without chips $.99
			Math Fight Add or Subt to 10 App Level: Easy		
					TapSum! Decompose to 20 App: Target numbers to 20

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The Revolution of Technology for CCSSM Fluency

| Working Toward K.OA.1	Working Toward K.OA.5	Working Toward K.OA.3	Working Toward 1.OA.6	Working Toward 1.OA.1 and 1.OA.2	Working Toward 2.OA.2
Illuminations Five Frame Compose to 5 Games 1, 2, 3 Web Based Fluency		Illuminations Five Frame Compose to 10 Games 4 Web Based Fluency			
		Illuminations Ten Frame Compose to 10 Games 1, 2, 3 Web Based Fluency		Illuminations Ten Frame Compose to 20 Games 4 Web Based Fluency	

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Arithmaroo
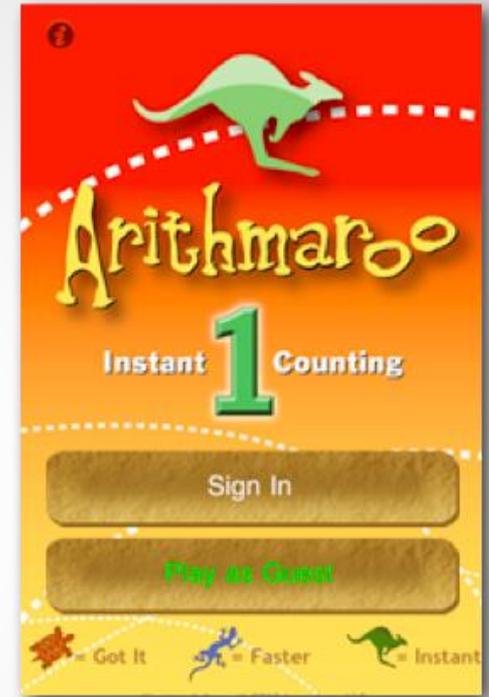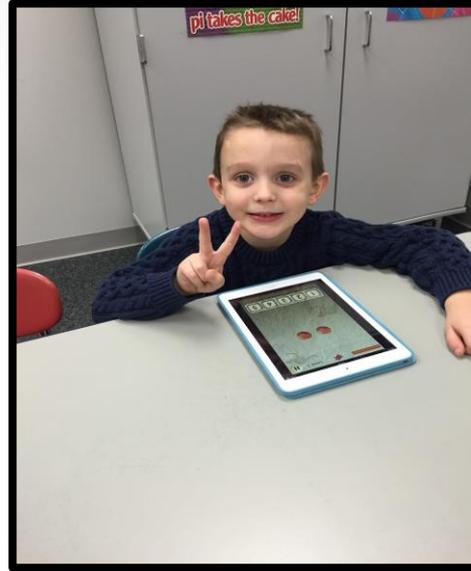
Compose to 5:   App Level 1*

Compose to 10: App Level 2*

Compose to 20: App Level 3*

* With finger patterns, dot/rock patterns, frames

Arithmaroo

Tens Frame Snap

Compose to 5 *
App Level:
Pairs 1-5
Add sum of 5

Add/Subtract to 10 *
App Level:
Pairs 5-10
Add sum to 10
Difference all options

* With 10-frames

Tens Frame Snap
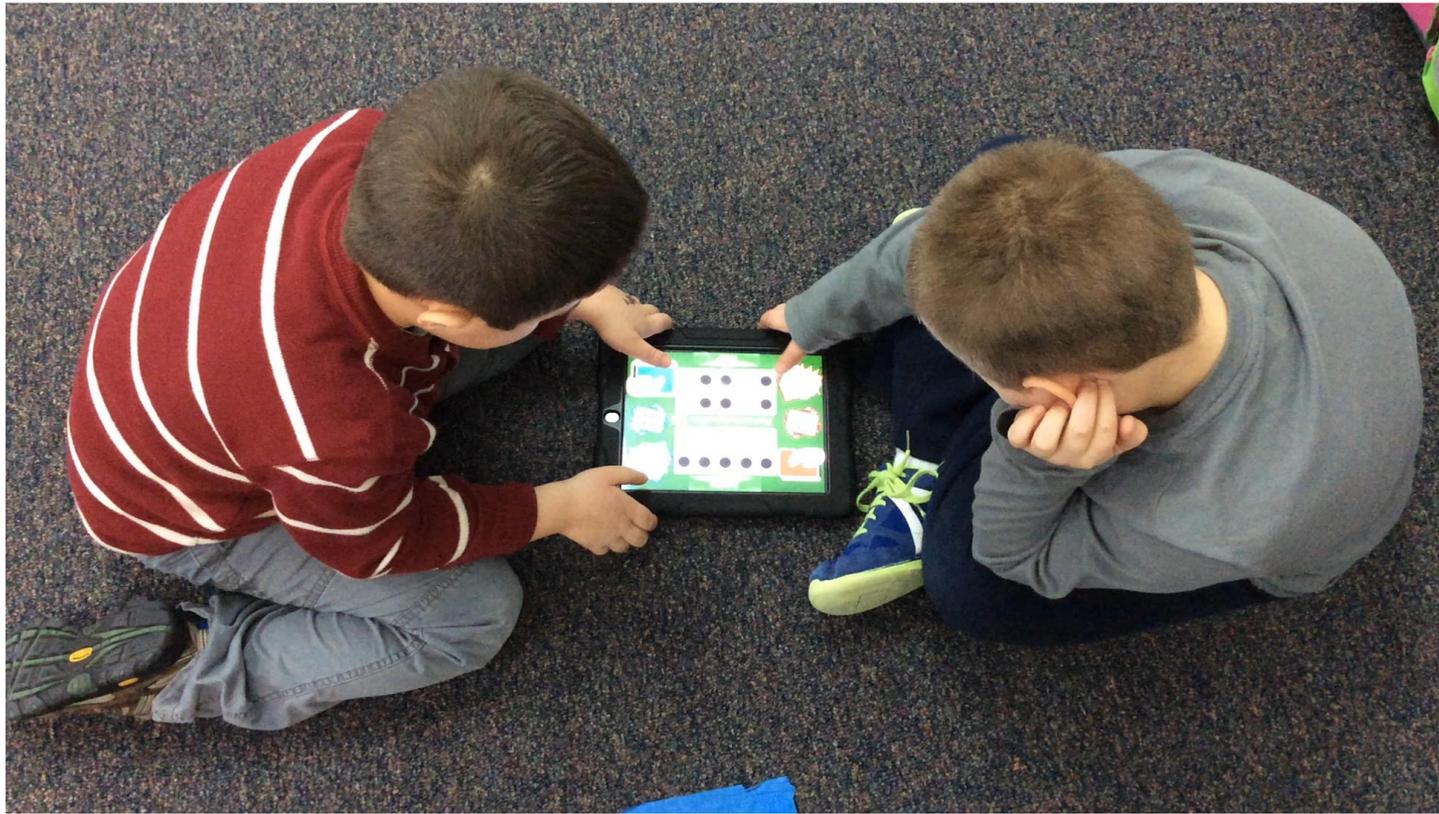
Hungry Fish

Compose to 5:   App Level 2,3*
Compose to 5:   App Level 2,3
Compose to 10:   App Level 4-8*
Compose to 10:   App Level 4-8
Compose to 20:   App Level 9-11

* Add finger pattern norm

Hungry Fish

Kakooma

Gregtangmath.com/kakooma

Teacher Interview

Teacher Interview

Tens frame snap:

1-5, Add 5	1-10, Add 10	1-10, Add 10, Difference 3	Star Students
Josh /Peyton	Matthew / Brooke	Malec / Frederick	Brooke
	Shaila /Lily	Brennen / Sophia	Conner
	Eashan / India	Tim /Abby	
	Andy / Rowan		
	Ayden / Aleah		
	Conner /Logan		
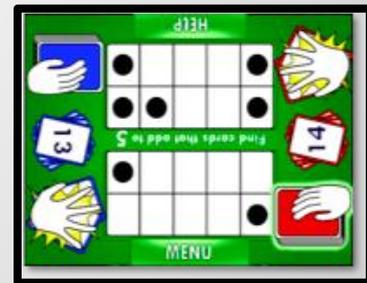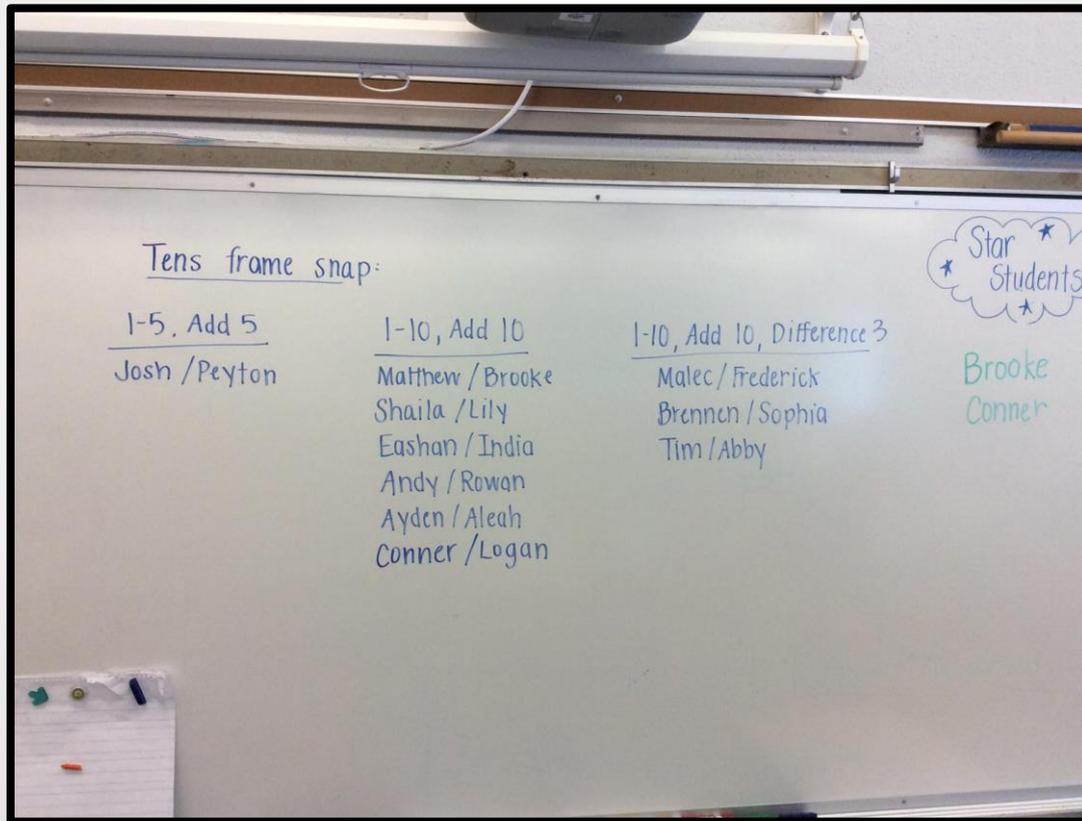
Teacher Interview
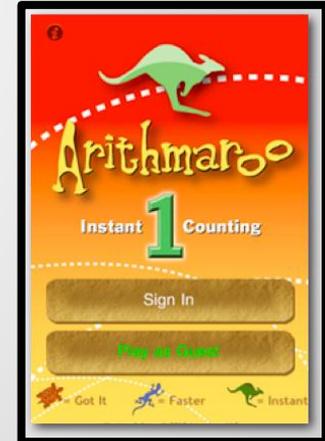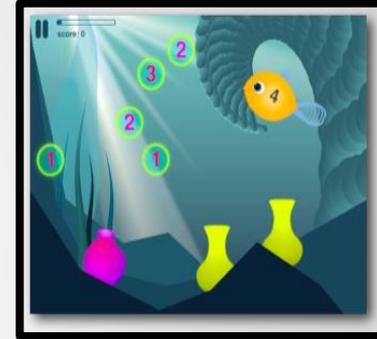
Grade 1 Classroom

Guided Access

"Math Tappers-Find Sums" Activity
iPhone Setting

Work with a partner and develop norms for the "Find Sums" App.

Compose/Decompose to 5 *
Compose/Decompose to 5
Compose/Decompose to 10 *
Compose/Decompose to 10
Compose/Decompose to 20 *
Compose/Decompose to 20
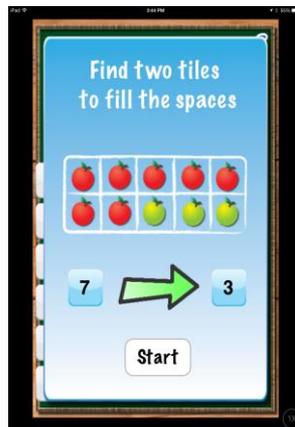
* With 10-frames

"Math Slide Basic Facts" Activity

Work with a partner and develop norms for "Math Slide" App.

Compose/Decompose to 10 *
Compose/Decompose to 10
Compose/Decompose to 20 *
Compose/Decompose to 20

*Dice, ten frames, bar diagrams, fingers, number line, etc.

THE BEAUTIFUL THING
ABOUT LEARNING
IS THAT
NO ONE CAN TAKE IT AWAY
FROM YOU.

BB KING

Thank you!