

The Flexibility Formula: K-6 Mathematics Professional Learning for Iowa Schools

Format: Blended (Asynchronous + Live via Zoom)

Asynchronous Virtual Courses

OPTIONAL BUT HIGHLY ENCOURAGED

- COURSES:
 - *The Flexibility Formula: K-2 Course*
 - *The Flexibility Formula: 3-6 Course*
 - *The Flexibility Formula: Coaching Course*
- AUDIENCE: K–6 Educators (who teach mathematics) and Instructional Coaches and Leaders (who support mathematics) in CSI schools
 - K-2 educators take the K-2 course
 - 3-6 educators take the 3-6 course
 - K-6 educators take both the K-2 and 3-6 courses
 - Coaches and Leaders should take the grade levels they support and additionally take the coaching course.
- TIME: 10+ hours of online content per course.

Synchronous Virtual Sessions: Making Connections

OPTIONAL BUT HIGHLY ENCOURAGED

- PURPOSE: To support deeper implementation and answer questions after completing the asynchronous work; will include breakout discussions, classroom connections, and planning.
- AUDIENCE: Teachers/Coaches/Leaders
- PROVIDED BY: DE mathematics consultants
- TIME: 7 sessions at 1.5 hours each for educators, spread out throughout the school year
 - 4:00–5:30 pm for educators/coaches/leaders. *See the schedule on page 2.*
 - 5:30-6:30 pm for instructional coaches/leaders only. *See the schedule on page 3.*

Notes:

1. *If you are a CSI school, please use the version of this document that Heidi Anthony and Sarah Seney have provided to your district.*
2. *Synchronized sessions are not required to take advantage of the Asynchronous courses.*
3. *Educators can still participate in the training, even if it is not a building- or district-wide initiative, but it is strongly encouraged.*

REGISTRATION LINK:

[Participant Request for Mathematics Professional Development for Grades K-6 in SY 25-26](#)

The Flexibility Formula: K-2nd Grade Synchronous Sessions

- All live sessions will be held 4:00 pm - 5:30 pm via Zoom for educators, instructional coaches, and leaders. An additional session from 5:30-6:30 pm will be provided for instructional coaches and leaders only.
- Each live session will include breakout discussions, classroom connections, and strategy planning, with coursework being completed beforehand.
- Registration links for each live session are provided below. **Participants must register separately for each session they plan to attend.**
- [Relicensure Credit: The Flexibility Formula \(K-2nd\)](#), see page 8 for additional information.

Session Schedule

Live Session Dates	Option	Session Title	Description
September 2, 2025	A	Kickoff & Orientation by Christina Tondevold	Welcome, overview, and expectations
September 4, 2025	B	Kickoff & Orientation by Christina Tondevold	Welcome, overview, and expectations
September 30, 2025	A	Welcome & Overview Module Module 1, Part 1 - Understanding	Why focus on flexibility? Early Numeracy Concepts
October 2, 2025	B	Welcome & Overview Module Module 1, Part 1 - Understanding	Why focus on flexibility? Early Numeracy Concepts
November 4, 2025	A	Module 1, Part 2 - Understanding	Number Relationships
November 6, 2025	B	Module 1, Part 2 - Understanding	Number Relationships
December 2, 2025	A	Module 2 - Observing	Observing students in action with early numeracy concepts and number relationships
December 4, 2025	B	Module 2 - Observing	Observing students in action with early numeracy concepts and number relationships
February 3, 2026	A	Module 3 - Connecting	Connecting number concepts, other math concepts and to home
February 5, 2026	B	Module 3 - Connecting	Connecting number concepts, other math concepts and to home
March 24, 2026	A	Module 4 - Experiencing	Experiencing: Number Routine, Contextual Problems, Practice
March 26, 2025	B	Module 4 - Experiencing	Experiencing: Number Routine, Contextual Problems, Practice
April 21, 2026	A	Wrap-Up & Application	Reflection & Implementation Planning
April 23, 2026	B	Wrap-Up & Application	Reflection & Implementation Planning

The Flexibility Formula: 3rd-6th Grade Synchronous Sessions

- All live sessions will be held 4:00 pm - 5:30 pm via Zoom for educators, instructional coaches, and leaders. An additional session from 5:30-6:30 pm will be provided for instructional coaches and leaders only.
- Each live session will include breakout discussions, classroom connections, and strategy planning, with coursework being completed beforehand.
- Registration links for each live session are provided below. **Participants must register separately for each session they plan to attend.**
- [Re-licensure Credit: The Flexibility Formula \(3rd-6th\)](#), see page 8 for additional information.

Session Schedule

Live Session Dates	Option	Session Title	Description
September 9, 2025	A	Kickoff & Orientation by Christina Tondevold	Welcome, overview, and expectations
September 11, 2025	B	Kickoff & Orientation by Christina Tondevold	Welcome, overview, and expectations
October 07, 2025	A	Welcome & Overview Module Module 1, Part 1 - Understanding	Why focus on flexibility? Early Numeracy Concepts
October 09, 2025	B	Welcome & Overview Module Module 1, Part 1 - Understanding	Why focus on flexibility? Early Numeracy Concepts
November 11, 2025	A	Module 1, Part 2 - Understanding	Number Relationships
November 13, 2025	B	Module 1, Part 2 - Understanding	Number Relationships
December 09, 2025	A	Module 2 - Observing	Observing students in action with early numeracy concepts and number relationships
December 11, 2025	B	Module 2 - Observing	Observing students in action with early numeracy concepts and number relationships
February 10, 2026	A	Module 3 - Connecting	Connecting number concepts, other math concepts and to home
February 12, 2026	B	Module 3 - Connecting	Connecting number concepts, other math concepts and to home
March 31, 2026	A	Module 4 - Experiencing	Experiencing: Number Routine, Contextual Problems, Practice
April 2, 2025	B	Module 4 - Experiencing	Experiencing: Number Routine, Contextual Problems, Practice
April 28, 2026	A	Wrap-Up & Application	Reflection & Implementation Planning
April 30, 2026	B	Wrap-Up & Application	Reflection & Implementation Planning

Flexibility Formula K-2nd Viewing Times

Module 0 - Welcome & Overview

These four videos provide an overview of the concepts. These videos are the same for BOTH the K-2 and 3-6 courses, so if you watch them in one, you do not need to watch them in the other. There are four files, and the module has a total run time of 44 minutes.

Min/Sec	Session
15:25	Iowa, Welcome to the Flexibility Formula
18:59	Why Focus on Flexibility?
04:50	Understanding & Observing
05:40	Connecting & Experiencing

Module 1 - Understanding

Build your understanding of the eight essential number sense concepts in PreK-2nd grade; each examined individually while highlighting their practical integration. There are 10 files, and the module has a total runtime of 2 hours and 28 minutes.

Min/Sec	Session
20:41	Snapshot of Understanding
11:09	Understand Versus Doing Math
19:22	Subitizing
17:25	Verbal Counting
21:07	Object Counting & Cardinality
12:37	Spatial Relationships
13:00	One/Two More & Less
15:38	Benchmarks
16:28	Part-Part-Whole
01:24	Final Thoughts on Understanding

Module 2 - Observing

Module 2 focuses on the importance of observing students to gain insights into their learning processes rather than relying solely on assessments. There are five files, and the module has a total runtime of 1 hour and 32 minutes.

Min/Sec	Session
15:53	Snapshot of Observing
18:36	How to Observe the 4 Early Number Concepts
21:56	How to Observe the 4 Number Relationships
32:45	Observing K-2 Students in Action
03:31	Final Thoughts on Observing

Course resources—including the structure, files, and videos—are intended solely for use by Iowa educators within Iowa schools. Any distribution or use outside this context is strictly prohibited.

Module 3 - Connecting

Explore the interconnectedness of the 8 Number Sense Concepts within themselves, broader math principles, & your students' lives outside of school, emphasizing a holistic approach to teaching mathematics. There are five files, and the module has a total runtime of 1 hour and 16 minutes.

Min/Sec	Session
19:57	Snapshot of Connecting
22:29	Connecting the Number Concepts
28:33	Connecting to other Math Concepts
02:51	Connecting Number Concepts to Home
02:44	Final Thoughts on Connecting

Module 4 - Experiencing

Discover three key types of mathematical experiences supported by research, along with additional resources to enrich traditional lessons. There are seven files, and the module has a total runtime of 2 hours and 9 minutes.

Min/Sec	Session
04:26	Snapshot of Experiencing
25:00	Three Experiences Students Should Have in Math
20:11	Number Sense Routines
26:15	Contextual Problems
23:04	Practice
16:16	Modifying Textbook Lessons
14:08	Final Thoughts on Experiencing

Implementation Bonuses

These bonuses help you implement the ideas shared throughout the course. There are eight files, and the module has a total runtime of 1 hour and 43 minutes.

Min/Sec	Session
13:11	Creating Visuals for 3rd-6th
28:32	StraDDegy
06:49	Number Routine: The Count Routine
16:25	Number Routine: Disappearing Act
12:42	Number Routine: Number Lines
09:35	Contextual Problems: Numberless Word
05:18	Games: Bingo

Flexibility Formula 3rd-6th Viewing Times

Module 0 - Welcome & Overview*

These four videos provide an overview of the concepts. These videos are the same for both the K-2 and 3-5 courses, so if you watch them in one, you do not need to watch them in the other. There are four files, and the module has a total runtime of 44 minutes.

Min/Sec	Session
15:25	Iowa, Welcome to the Flexibility Formula*
18:59	Why Focus on Flexibility?*
04:50	Understanding & Observing*
05:40	Connecting & Experiencing*

Module 1 - Understanding

Build your understanding of the eight essential number sense concepts in PreK-2nd grade; each examined individually while highlighting their practical integration. There are ten files, and the module has a total runtime of 3 hours and 18 minutes.

Min/Sec	Session
23:04	Snapshot of Understanding
10:40	Understand Versus Doing Math
30:29	Understanding Subitizing
23:47	Understanding Verbal Counting
25:51	Understanding Object Counting & Cardinality
12:59	Understanding Spatial Relationships
19:29	Understanding One/Two More & Less
21:13	Understanding Benchmarks
29:44	Understanding Part-Part-Whole
01:24	Final Thoughts on Understanding*

Module 2 - Observing

Module 2 focuses on the importance of observing students to gain insights into their learning processes rather than relying solely on assessments. There are five files, and the module has a total runtime of 1 hour and 27 minutes.

Min/Sec	Session
15:53	Snapshot of Observing*
13:48	Observing the 4 Early Numeracy Concepts
16:55	Observing Number Relationships
37:47	Observing Students
03:31	Final Thoughts on Observing*

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Module 3 - Connecting

Explore the interconnectedness of the 8 Number Sense Concepts within themselves, broader math principles, & your students' lives outside of school, emphasizing a holistic approach to teaching mathematics. There are five files, and the module has a total runtime of 1 hour and 16 minutes.

Min/Sec	Session
19:57	Snapshot of Connecting*
31:59	Connecting the Number Concepts
19:13	Connecting to other Math Concepts
02:51	Connecting Number Concepts to Home*
02:44	Final Thoughts on Connecting*

Module 4 - Experiencing

Discover three key types of mathematical experiences supported by research, along with additional resources to enrich traditional lessons. There are seven files, and the module has a total runtime of 2 hours and 16 minutes.

Min/Sec	Session
04:26	Snapshot of Experiencing*
25:00	Three Experiences Students Should Have in Math*
25:04	Number Sense Routines
31:23	Contextual Problems
20:40	Math Practice that Builds Number Sense
16:16	Modifying Textbook Lessons*
14:08	Final Thoughts on Experiencing*

Implementation Bonuses

These bonuses help you implement the ideas shared throughout the course. There are seven files, and the module has a total runtime of 1 hour and 15 minutes.

Min/Sec	Session
14:32	Creating Visuals for 3rd-6th*
06:49	Number Routine: The Count Routine*
16:25	Number Routine: Disappearing Act*
12:42	Number Routine: Number Lines*
09:35	Contextual Problems: Numberless Word*
05:18	Games: Bingo*
10:31	Games: Difference To ____*

*Denotes sessions that are repeated from the K-2 course. This means that educators do not necessarily view them again, but may want to for review. Christina is going to add items to support 6th grade.

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Relicensure Credit

Course Description

The Flexibility Formula for K-2nd and 3rd-6th provides an opportunity to learn the foundation of counting in a way that is not just memorizing the sequence of numbers. K-1st-grade educators will learn how to help children build connections between numbers as they learn to count. Topics will include developing counting with an eye toward building number sense, pitfalls of learning to count, observing students, subitizing, and counting up to 100.

[Click here for the syllabus for K-2nd Grade.](#)

[Click here for the syllabus for 3rd-6th Grade.](#)

Course Objectives

Upon completion of this training, you should be able to:

- Understand how flexibility when operating with numbers impacts student achievement.
- Model and infuse instructional strategies that promote flexibility when operating with numbers for students in their learning.

Relicensure Credit Requirements

Unit Reflections

- Submit one reflection per module.
- Each reflection should be approximately one double-spaced page.
- Focus on:
 - Describe what you learned from the module.
 - Explain what you would share with a colleague.
 - Reflect on how this learning will influence your professional practice moving forward.

Overall Reflection Paper

- Submit a comprehensive 2-page, double-spaced reflection.
- Summarize your overall learning from the course.

Registration

Here is how to register for the credit:

- Go to the [AEA Online Learning System](#)
- Login
- Search for "Building Math Minds"
- Find and select "Register" for the grade span