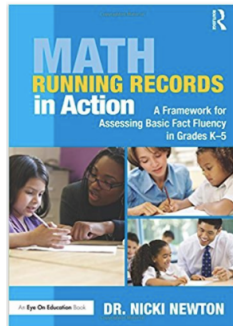


Math Running Records in Action (k-2) (3-5)



Instructor: Dr. Nicki Newton

Email: drnickicourses@gmail.com

Office Hours: Virtual office hours are by appointment. We can meet through virtual face to face conference or by phone. Email me for an appointment.

Required Text/Materials:

1. Math Running Records in Action by Dr. Nicki Newton
2. Links will be provided throughout the course for suggested readings and activities

Course Description: Math Running Records in Action is a course designed to introduce teachers how to assess for basic math fact fluency. Math Running Records are like the GPS of math fluency, they help teachers to figure out exactly where students are and then what the next instructional moves should be to lead to proficiency with basic math facts. Throughout the course we will discuss the specifics of administering, evaluating and then interpreting the data for student instruction. The sessions will follow the chapters in the book.

Course Goals/Student Learning Outcomes: The goal of this course is that teachers fully understand and can implement Math Running Records by the end of the course. Teachers should be able to describe what it is, how to do it, and what to do with the data in order to improve student achievement.

Instructional Methods: Throughout this course we will use a variety of instructional methods, including mini-lectures, discussions, readings and videos. Each module is taught through a video series. There are also some additional links that are added to the syllabus.

Grading: Your grade will be based on the following percentages:
You must get at least 75% to pass the class.

Introductory Post /Fluency Preassessment- Describing your class currently. Thinking about how math assessment in general and Math Running Records in particular can drive instruction.	20%
Online Surveys & Quizzes- Quizzes on various modules throughout the course	25%
Final Exam –Math Running Records Final Exam	30%
Completion of all modules	25%

Important Dates: You have 90 days to complete the course upon initiation of the course.

Academic Integrity: Please make sure that all your work is your own. You are expected to do your own work and not plagiarize from the work of others. The work is to be reflective of the theories and concepts that we study and the implementation with your class.

Module 1- 1 hour*	Introduction ESSENTIAL QUESTION: How do Math Running Records help us to differentiate instruction for all students? Videos Reflection: <i>What current assessments do you use? How might you get started with running records?</i>
Module 2- 1 hour*	Fluency ESSENTIAL QUESTION: What is fluency? Why is it important? Videos Reflection: <i>What are the research based components of math fluency? Which ones are currently emphasized in your classroom? Which ones do you need to do more work with?</i>
Module 3- 1 hour*	Parts of a Math Running Record

	<p>ESSENTIAL QUESTION: What are the 3 parts of a Math Running Record? Videos <i>Reflection: Why are there 3 parts? What is the purpose of each part of the Math Running Record?</i></p>
Module 4– 1 hour*	<p>Understanding Addition ESSENTIAL QUESTION: What does it mean to have conceptual understanding and procedural fluency with addition? Videos: https://www.youtube.com/watch?v=rNyKFP8WEag https://www.youtube.com/watch?v=afO2a3SKEqk https://www.youtube.com/watch?v=orbL0tehPQ0 https://www.youtube.com/watch?v=x87vvAXjEyw https://gfletchy.com/2016/03/04/the-progression-of-addition-and-subtraction/ http://thinkmath.edc.org/resource/addition-and-subtraction https://www.youtube.com/watch?v=OkW1Y11tGxw https://cindyelkins.edublogs.org/tag/subtraction/</p> <p><i>Reflection: What does it mean to add? What are the big ideas and essential understandings about addition? What do we need students to be able to know and do in terms of addition?</i></p>
Module 5– 1 hour*	<p>Assessing Addition ESSENTIAL QUESTION: What is the research-based continuum for addition strategies? Videos <i>Reflection: What are the different types of addition strategies?</i></p>
Module 6– 1 hour*	<p>Instructional Implications ESSENTIAL QUESTION: What are the instructional implications for the data? Videos <i>Reflection: What types of activities should you set up to teach addition? What is the role of the concrete, pictorial, abstract cycle of engagement in planning purposeful activities to practice addition?</i></p>
Module 7– 1 hour*	<p>Understanding Subtraction ESSENTIAL QUESTION: What does it mean to have conceptual understanding and procedural fluency with subtraction? Videos: https://www.youtube.com/watch?v=5X8L8v7o4YU</p>

	<p>https://www.youtube.com/watch?v=OkW1Y11tGxw https://cindyelkins.edublogs.org/tag/subtraction/ https://gfletchy.com/2016/03/04/the-progression-of-addition-and-subtraction/</p> <p>Reflection: <i>What does it mean to subtract? What are the big ideas and essential understandings about subtraction? What do we need students to be able to know and do in terms of subtraction?</i></p>
Module 8- 1 hour*	<p>Assessing Subtraction ESSENTIAL QUESTION: What is the research-based continuum for subtraction strategies? Videos Reflection: <i>What are the different types of subtraction strategies?</i></p>
Module 9- 1 hour*	<p>Instructional Implications for Subtraction ESSENTIAL QUESTION: What are the instructional implications for the data? Videos Reflection: <i>What types of activities should you set up to teach subtraction? What is the role of the concrete, pictorial, abstract cycle of engagement in planning purposeful activities to practice subtraction?</i></p>
Module 10- 1 hour*	<p>Understanding Multiplication ESSENTIAL QUESTION: What does it mean to have conceptual understanding and procedural fluency with multiplication? Videos: https://vimeo.com/149428217 https://mindfull.wordpress.com/2011/02/06/introducing-multiplication-with-understanding/ https://teachingtoinspire.com/2015/09/teaching-conceptual-understanding-of.html</p> <p>Reflection: <i>What does it mean to multiply? What are the big ideas and essential understandings about multiplication? What do we need students to be able to know and do in terms of multiplication?</i></p>
Module 11- 1 hour*	<p>Assessing Multiplication ESSENTIAL QUESTION: What is the research-based continuum for multiplication strategies? Videos Reflection: <i>What are the different types of multiplication strategies?</i></p>

Module 12- 1 hour*	<p>Instructional Implications for Multiplication ESSENTIAL QUESTION: What are the instructional implications for the data? Videos <i>Reflection: What types of activities should you set up to teach multiplication? What is the role of the concrete, pictorial, abstract cycle of engagement in planning purposeful activities to practice multiplication?</i></p>
Module 13- 1 hour*	<p>Understanding Division ESSENTIAL QUESTION: What does it mean to have conceptual understanding and procedural fluency with division? Videos https://teachingtoinspire.com/2015/09/teaching-conceptual-understanding-of.html https://nrich.maths.org/5450 <i>Reflection: What does it mean to divide? What are the big ideas and essential understandings about division? What do we need students to be able to know and do in terms of division?</i></p>
Module 14- 1 hour*	<p>Assessing Division ESSENTIAL QUESTION: What is the research-based continuum for division strategies? Videos <i>Reflection: What are the different types of division strategies?</i></p>
Module 15- 1 hour*	<p>Instructional Implications for Division ESSENTIAL QUESTION: What are the instructional implications for the data? Videos <i>Reflection: What types of activities should you set up to teach division? What is the role of the concrete, pictorial, abstract cycle of engagement in planning purposeful activities to practice division?</i></p>
Module 16- 1 hour*	<p>Action Planning ESSENTIAL QUESTION: How do we get started?</p>

*Each module will be 1 hour including videos, reflection, discussion and external links to readings and videos

Readings: Math Running Records in Action (2016, Newton)

Additional Resources: Throughout the course there are several links with additional information. These links are also shown here on the syllabus.

Discussion Board: There is a discussion board in the course. Students are encouraged to contribute to the ongoing discussion of the course.

Materials: Book

Examples of Quizzes:

Module 2

1. What is fluency?
2. What is the difference between conceptual understanding and procedural fluency?
3. What do we mean by strategic competence?
4. What is the role of reasoning when talking about basic fact fluency?
5. What is the difference between memorizing facts and learning them?

Module 3

1. What is a Math Running Record?
2. Why is it considered a formative assessment?
3. What is the first part of the record? Why is this important?
4. What is the second part of the record? How does it help us understand the student's fluency profile?
5. What is the third part of the record? How does it help us to understand the student's fluency profile?