



Favorite Math Fact Sites and Resources Most frequently suggested by the Build Math Minds Facebook Community

First, [here's a vlog](#) by our [Build Math Minds](#) group's founder Christina Tondevold on the learning of math facts. These are the ideas that are the focus of our group's work toward every student building understanding of single-digit math facts using connections and relationships while building positive math identities and agencies.

Also, Christina offers a [Building Math Fluency Starter Kit](#) focusing on Addition and Multiplication from sharing the research to ideas for activities.

Developing Conceptual Understanding of Math Facts

[Math Fact Lab](#) -

- free
- offers a variety of visuals such as rekenreks, 10 frames, number lines, bar diagrams
- learning progression of the facts
- focus on inverse relationship between add/sub and mult/div

[Multiplication By Heart](#) - Created by [Math for Love](#) (Dan Finkle and Katherine Cook), this [set of cards](#) is also available digitally in Mathigon.

- free
- learning progression of the facts
- includes variety of visuals including area model and equal group images
- no speed element
- designed to be 5 minutes each day and will stop the student after those 5 minutes.

[Stick and Split](#)

- Factors appears as one stick and students combine them to make a product
- Students can split bars into smaller factors before coming to make sticks
- Follows progression of products from small numbers to larger

Working on Automaticity Once Conceptual Understanding is Built

[Xtra Math](#)

- Free and paid version - paid version allows you to choose the operation
- Can adjust the time element

[Reflex](#)

- Game-like
- Many districts have received grants to fund it
- Personalized to the students
- Pyramid of facts report great visual for progress

[99 Math](#) -

- free
- Games with a variety of numbers - not just fact fluency
- Offers choice of individual practice or whole class game
- When playing whole class, Round 1 displays highest scores, Round 2 highest improvement, and Round 3 highest accuracy
- Reports available to show strengths and weakness of each student

Awesome Games and Game Sites

[Number Hive](#) - Created by Christopher Hogbin, available as printed copies as well as digitally.

- variety of numbers for addition and multiplication from subitizing small amounts to add up to multiplying algebraic expressions
- strategy based as you try to get 4 in a row and block your opponent
- free to play digitally, fee to download printable gameboards

[Product Game](#) - Available in 3 versions - foundation facts (x2, x5, x10), related doubles (x2, x4, x8), and all facts.

[Links to Games Curated and Vetted by The Math Viking](#), Kristine Vennemann

[Games and Game Resources Padlet curated by Ann Elise Record](#)

[Dr Nicki Newton's Math Fact Fluency Playground site](#)

[Greg Tang's Game Site - Kakooma](#)

[Greg Tang's Games Site - Break Apart Strategy Practice - all 4 operations](#)

[Factris](#) by Mathigon

[Kentucky Center for Math Companion website](#) of games from [Math Fact Fluency](#) book by Jennifer Bay-Williams and Gina Kling

[Kentucky Center for Math Addition and Subtraction Games and Activities](#)

[Kentucky Center for Math Multiplication and Division Games and Activities](#)

Additional Resources for Building Conceptual Understanding

[Math Flips](#) by Berkeley Everett for explicitly showing number relationships with visuals

[Same But Different Images](#) by Susan Looney

[Graham Fletcher's Multiplication Subitizing Cards](#)

[Multiplication Course Videos](#) by Steve Wyborney

[Padlet of fluency resources](#) for the Math Running Records Facebook group including videos made by Ann Elise Record on ways we can explore each strategy with each operation using concrete manipulatives.

Recommended Books on Math Fact Fluency

[Math Fact Fluency: 60+ Games and Assessment Tools to Support Learning and Retention](#) by Jennifer Bay-Williams and Gina Kling

[Math Running Records](#) by Dr Nicki Newton

[Fluency Doesn't Just Happen with Addition and Subtraction](#) by Dr. Nicki Newton, Dr. Alison Mello, and Ann Elise Record

Fluency Doesn't Just Happen with Multiplication and Division by Dr. Nicki Newton, Dr. Alison Mello, and Ann Elise Record (anticipated spring 2024)

[The Fact Tactics Multiplication Fact Fluency Program](#) by Juli Dixon

[Mastering the Basic Facts in Addition and Subtraction](#) by John SanGiovanni and Susan O'Connell

[Mastering the Basic Facts in Multiplication and Division](#) by John SanGiovanni and Susan O'Connell

[Figuring Out Fluency](#) by Jennifer Bay-Williams and John SanGiovanni

Recommended Kits for Building Fact Fluency

[Building Fact Fluency Kit](#) Graham Fletcher and Tracy Zager

[Multiplication By Heart](#) by Math for Love (Dan Finkle and Katherine Cook)

[Origo Box of Facts](#)

Fantastic Videos and Podcasts Focusing on Fact Fluency

[Kids Math Talk - Episode with Dr Nicki Newton, Dr. Alison Mello, and Ann Elise Record](#) with host Desiree Harrison

Interview on [Teacher as...podcast with Dr Nicki Newton and Ann Elise Record](#) as they discuss various types of games and the ones they recommend for developing fluency.

Hosts Laura Tomas and Karina Cousins of [Learning Through Math chat with Juli Dixon](#) about her new book [Fact Tactics Fluency Program](#) (multiplication only).

Hosts Kyle Pearce and Jon Orr of [Making Math Moments That Matter chat with Jennifer Bay-Williams](#) about her book [Figuring Out Fluency](#).

Hosts Pam Harris and Kim Montegue of [Math is Figureoutable](#) discuss [Addition](#), [Subtraction](#), and [Multiplication](#) Facts over many episodes for each operation.