Professional Resource Take Aways

Book Title: Figuring Out Fluency in Mathematics

Author(s): Bay-Williams + SanGiovanni

Things to ADAPT in My Teaching	New Things to ADOPT	Things to ELIMINATE or Reduce
-explicitely teach st. the difference between tools + strategies. (pg 22) -More emphasis on "Does my answer make sense?" -use more vertical number lines and not just horizontal ↳ helps w/ graphing later -use more fraction bars for division. $65 \div 5 \rightarrow \frac{65}{5}$ *Change vocabulary ~~Fact Fluency~~ → Fact Recall	-put FAQ re: fluency in parent newsletters -Do Activity 3.3 (pg 54) (decomposing #s) -Pg 60 - Strategies to Explicitly teach for (+, −, ×, ÷) -Practice Estimating often ↳ help with "Is this a reasonable answer?" -use stacking cubes to teach add. ~~decimals~~ fractions (make 10 strategy) (pg. 82) *Turn Figure 4.12 into an anchor chart + teach to students* Activity 5.1 - Combinations Card game (also Game 5.3) - use at beg. of year for review + Math Games procedures. Game 5.5 - 15s + 30. Act. 5.8 would make a good Number Talk (pg 122) Math Center → 6.7 (pg 151) *Fluency Rubric pg 163	-timed math facts -emphasis on speed -STOP saying "multiplication makes the number bigger." ↳ not always $20 \times 0.25 = 5$ $16 \div 0.4 = 40$ (Pg. 23)

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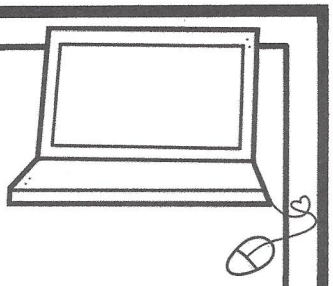
Sites to Check Out:

resources.corwin.com/figuringoutfluency ← has all printable activities

www.brainingcamp.com ← virtual math building



*Look into Number Strings more (pg 135)

More Ideas:

*Fluency requires actions not memorizing

*Strategies are number-based while algorithms are digit based. (pg 28) Do not turn strategies into algorithms

*Basic facts must be taught with a strategy-based approach.

↳ Strategy groups outperformed + retained more than memorization

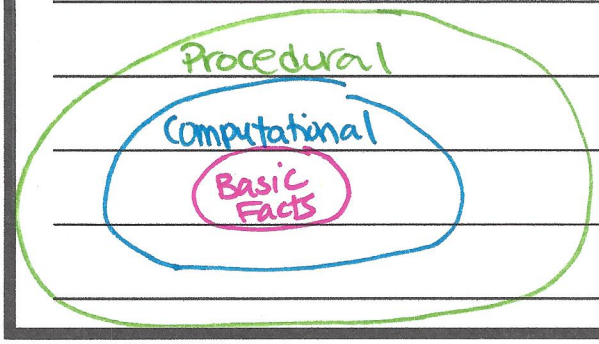
(1) Learn to use Strategies → (2) Learn to Choose Strategies

**Standard algorithms should be treated as the "last resort". **
-choose more efficient options.

Basic Fact recall takes time. St. need time to practice skills 1st.

*8 Procedural Automaticities for Fluency (pg 127) *Most Important. *
Skills

Relationship of different types of fluency (pg 2)



Procedural Fluency

- Efficiency
- Flexibility
- accuracy

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