

Teaching Mathematical Fluency K-5



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Think Back

What was math class like when you were a student?

- What did you do in math class?
- What did math class look like and sound like?

No group work

Good old days

"It was confusing."

"I just didn't get it."

Teacher telling how to do it

"I hate math."

Silent practice

One way to get the answer

"I was frustrated."

Lots of memorizing

"Math made no sense to me."

Lots of worksheets

No manipulatives

One right answer

"Math class was boring."

"I don't have a math mind."



Shifts in Mathematical Thinking



- Giving time to think
- Give math a context and make connections between math ideas
- Make Math Visual- see it, touch it, move it, represent it
- Provide opportunities for talk and writing about math

Eliminate It!

10	2
5	8

See It, Touch It,
Move It



Books, Books, Books

Brad and Joe help put books on some library shelves. Brad puts two books on the first shelf. Brad puts four books on the second shelf. Brad puts six books on the third shelf. Joe puts one book on the first shelf. Joe puts four books on the second shelf. Joe puts seven books on the third shelf. Brad tells Joe that they both have the same total amount of books on the library shelves. Is Brad correct?



Solve
Just Kidding

$$5 \times \frac{2}{3}$$



In Closing...

What are the benefits to the “New Math”?

- Engagement
- Shows importance of identifying the question (understanding the problem)
- Constantly requires students to determine necessary information
- Focuses on process rather than answer
- Highlights varied approaches
- Shows connections between approaches
- Builds confidence and skills

So... How can YOU help?

1. Encourage child to take risks / promote the struggle (MP1)
2. Encourage your child to take their time and to think through problems / to understand the why (MP1, 8)
3. Multiple ways to solve a problem (MP1)
4. Talking & writing about math / Tell & show how (MP 2,3,4)
5. Help students learn to listen for understanding (MP3, 7)
6. Mental math / estimation as a tool (MP5)
7. Technology to support math (MP5)
8. Encourage double-checking / show another way (MP4,6)

Most Importantly...



**KEEP
CALM
AND
HAVE FUN
WITH MATH**