

Ideas in Mathematics:

Fluency



Key Concept

Fluency-building activities provide opportunities for students to master facts and other necessary math knowledge. Fact fluency includes recall of problems with single-digit addends, minuends, factors, and quotients. Proficiency with these skills is called procedural fluency.

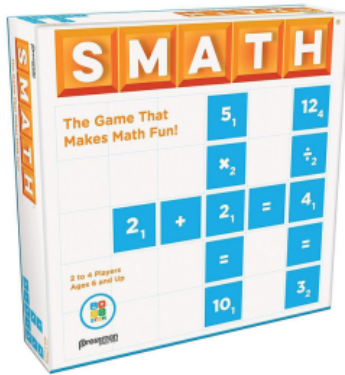
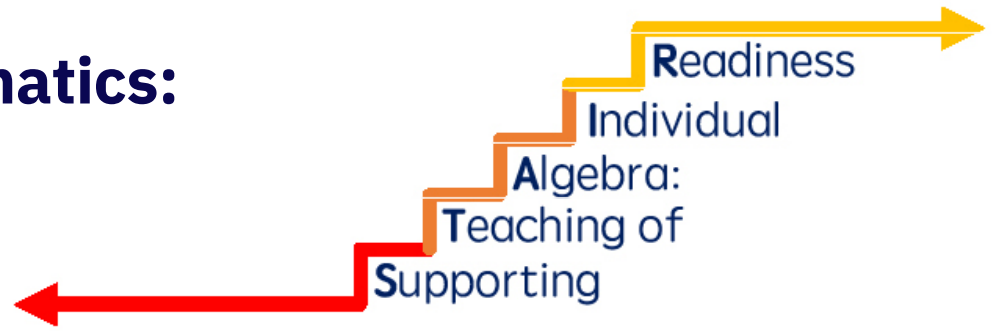
Why?

- Fluency practice supports students with limited working memory and math difficulties.
- Mastery of basic math facts and procedures frees cognitive resources.
- This allows students to focus on more complex math content.

How?

- Struggling math students benefit from explicit instruction in learning strategies.
- Teachers should provide brief (1–2 minutes) daily fluency practice.

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Cover, Copy, Compare

$\begin{array}{r} 9 \\ \times 8 \\ \hline 72 \end{array}$		$\begin{array}{r} 8 \\ \times 7 \\ \hline 56 \end{array}$	
$\begin{array}{r} 7 \\ \times 7 \\ \hline 49 \end{array}$		$\begin{array}{r} 9 \\ \times 9 \\ \hline 81 \end{array}$	
$\begin{array}{r} 8 \\ \times 8 \\ \hline 64 \end{array}$		$\begin{array}{r} 6 \\ \times 6 \\ \hline 36 \end{array}$	
$\begin{array}{r} 6 \\ \times 7 \\ \hline 42 \end{array}$		$\begin{array}{r} 7 \\ \times 9 \\ \hline 63 \end{array}$	
$\begin{array}{r} 6 \\ \times 9 \\ \hline 54 \end{array}$		$\begin{array}{r} 6 \\ \times 8 \\ \hline 48 \end{array}$	

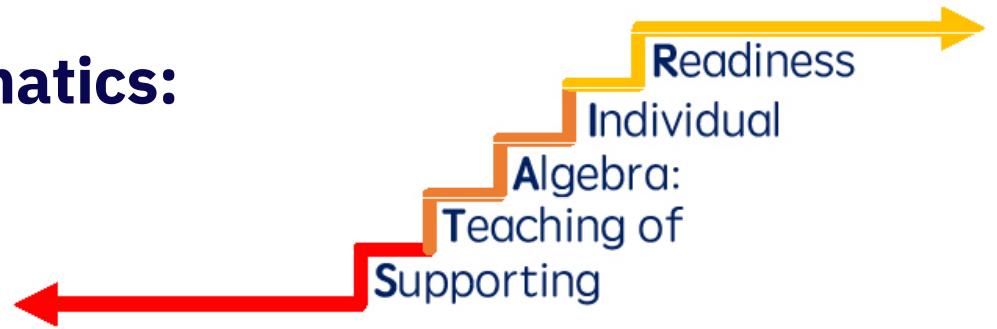
Taped Problems

$\begin{array}{r} 7 \\ \times 6 \\ \hline \end{array}$	$\begin{array}{r} 6 \\ \times 6 \\ \hline \end{array}$	$\begin{array}{r} 7 \\ \times 5 \\ \hline \end{array}$
$\begin{array}{r} 5 \\ \times 4 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ \times 7 \\ \hline \end{array}$	$\begin{array}{r} 6 \\ \times 7 \\ \hline \end{array}$
$\begin{array}{r} 4 \\ \times 4 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ \times 5 \\ \hline \end{array}$	$\begin{array}{r} 6 \\ \times 4 \\ \hline \end{array}$
$\begin{array}{r} 5 \\ \times 6 \\ \hline \end{array}$	$\begin{array}{r} 4 \\ \times 6 \\ \hline \end{array}$	$\begin{array}{r} 7 \\ \times 4 \\ \hline \end{array}$
$\begin{array}{r} 7 \\ \times 7 \\ \hline \end{array}$	$\begin{array}{r} 4 \\ \times 7 \\ \hline \end{array}$	$\begin{array}{r} 4 \\ \times 5 \\ \hline \end{array}$



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Resources

- <https://www.mathspiral.com/files/professional-learning/new-educators-S03/fluency-activity-list.pdf>
- <https://www.youtube.com/watch?v=hihsJkmiN2Y&t=2s>
- <https://www.mathspiral.com/files/professional-learning/new-educators-S03/spiral-flashcard-graph.pdf>