

Intervention Name: Pegword Mnemonics

Common Core State Standards Domain Areas: (check all that apply)

Counting and Cardinality (K)	Operations and Algebraic Thinking (K-5)	Numbers and Operations in Base Ten (K-5)	Numbers and Operations – Fractions (3-5)	Measurement and Data (K-5)	Geometry (K-HS)	Ratios and Proportional Relationships (6-7)	The Number System (6-8)	Expressions and Equations (6-8)	Statistics and Probability (6-HS)	Functions (8-HS)	Number and Quantity (HS)	Algebra (HS)	Modeling (HS)
	X	X	X	X	X	X	X	X	X	X	X	X	X

Setting: (check all that apply)

Whole-class	Small-group	Individual
X	X	X

Focus Area: (check all that apply)

Acquisition	Fluency	Generalization
X		

Function of Intervention: The purpose of pegword mnemonics is to teach students definitions of new and unfamiliar vocabulary words by linking these new terms to information and knowledge that is familiar to the student.

Brief Description: Mnemonics are strategies and techniques that aid in memory. A pegword mnemonic connects a number with a rhyming word that can be visually depicted. These visual images are then used to help students remember facts or events.

Examples of pegwords

- One: bun
- Two: shoe (glue)
- Three: tree
- Four: door
- Five: knives (hive)
- Six: sticks
- Seven: oven (heaven)
- Eight: gate (plate)
- Nine: line (wine)
- Ten: pen (hen)

(Baine, 1986)

Examples of pegwords used for multiplication:

A.) $6 \times 6 = 36$

6 (sticks) \times 6 (sticks) = 36 (dirty sticks)

Pegword sentence: Sticks by Sticks are Dirty Sticks

B.) $4 \times 8 = 32$

4 (door) \times 8 (gate) = 32 (dirty shoe)

Pegword sentence: (Open the) Door by a Gate to get a Dirty Shoe (adapted from Zisimopoulos, 2010)

Example of pegwords used for subtraction:

A.) $10 - 3 = 7$

10 (hen) $-$ 3 (tree) = 7 (oven)

Pegword sentence: The Hen flew from the Tree to avoid the Oven

Procedures:

- **Duration:** The time it takes for students to master each pegword may vary, but explicit introduction of each term should take between 3 to 10 minutes.
- **Teacher training:** Teachers can use pegword mnemonics that have already been created, create their own, or ask students to create their own pegword mnemonics. While formal training is not necessary, it is recommended that teachers read one of the articles in the references.
- **Instructional practices:** With a whole class, small group, or individual student, teachers explicitly introduce the pegword and link the pegword to a math fact.
- **Monitoring system:** During the learning process, teachers should ask students to recall and apply the steps of pegword mnemonics. Teachers can monitor students' ability to recall the math facts with typical fact assessments.

Critical Components (i.e., that must be implemented for intervention to be successful): The pegword must be rhyme with the corresponding number. The pegwords must be a term that is familiar to students, so they can link it to their background knowledge. Teachers must explicitly teach students how to use the pegwords to remember the facts.

Critical Assumptions (i.e., with respect to prerequisite skills): Pegwords can be used to teach basic facts, lists, or important sequence of numbers (e.g., historical events) and other content-specific facts involving numbers. This brief focused on math facts.

Materials:

Pegword list

Visual image of vocabulary word interacting with [sentence or rhyme](#) (teacher made or previously published)

References:

Baine, D. (1986). *Memory and instruction*. Englewood Cliffs, NJ: Educational Technology Publications, Inc.

Mastropieri, M. A., & Scruggs, T. E. (1989). Constructing more meaningful relationships: Mnemonic instruction for special populations. *Educational Psychology Review*, 1, 83-111.

Mastropieri, M. A., & Scruggs, T. E. (2007). *The inclusive classroom: Strategies for effective instruction*. Columbus, OH: Merrill Prentice Hall.

Zisimopoulos, D. A. (2010). Enhancing multiplication performance in students with moderate intellectual disabilities using pegword mnemonics paired with a picture fading technique. *Journal of Behavior Education*, 19, 117-133.