



Pirate Math Equation Quest (PMEQ)

What is PMEQ?

PMEQ is an intensive **math word-problem intervention** for **third-grade students** experiencing math difficulty. During PMEQ, students receive explicit instruction on reading, interpreting, setting up, and solving word problems with a focus on **schemas**. Students also receive modeling and practice related to **understanding the equal sign** and **equation solving** within the word-problem intervention.

Which schemas?

Total: Are parts put together for a total?

Difference: Are two amounts compared for a difference?

Change: Is there a starting amount that increases or decreases to a new amount?

Equal Groups: Are there groups with an equal number in each group?

RUN

If needed, number the graph.

1. **Read** the problem
2. **Underline** the label and **cross out** irrelevant info
3. **Name** the problem type

Total
Difference
Change
Equal Groups

TOTAL

1. Write $P1 + P2 = T$
2. Find T
3. Find P1 and P2
4. Write the signs
5. Find X

$P1 + P2 = T$

DIFFERENCE

1. Write $G - L = D$
2. [Compare sentence] and label G and L
3. Find D
4. Find G and L
5. Write the signs
6. Find ___

$G - L = D$

CHANGE

1. Write $ST \pm C = E$
2. Find ST
3. Find C
4. Find E
5. Write the signs
6. Find ___

$ST \pm C = E$

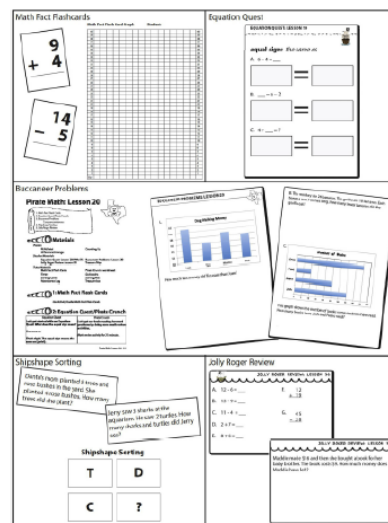
EQUAL GROUPS

1. Write $GR \times N = P$
2. Find P
3. Find GR and N
4. Write the signs
5. Find ___

$GR \times N = P$

Components of PMEQ?

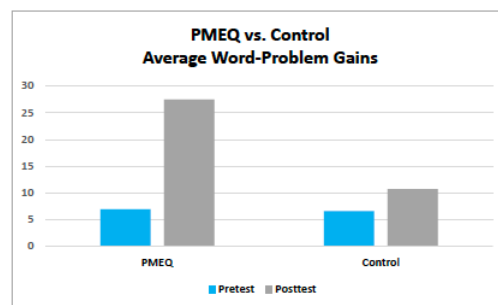
Interventionists administer PMEQ to individual students, **3 times per week**, **30 min per session**. Students receive the PMEQ intervention for **16 weeks**.



- (1) Math Fact Flashcards
- (2) Equation Quest
- (3) Buccaneer Problems
- (4) Shipshape Sorting
- (5) Jolly Roger Review

Why use PMEQ?

We worked with **304 students in 13 elementary schools**. After intervention, we posttested PMEQ and control students. PMEQ students outperformed students in the control group on tasks of word-problem solving, with **large effect sizes of > 2.4**.



Visit our **website** for more information, **demonstration videos**, and **free materials!**

www.piratemathequationquest.com



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