

Teaching and Learning of Math

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My Core Teaching Beliefs:

- 1 It's okay to walk away from a math problem.
- 2 It's okay to not be finished when class ends.
- 3 Your wonderings are important.
- 4 You have important mathematical ideas.
- 5 Play Matters.



1

It's okay to walk away from
a math problem.



”Can I do this tomorrow?
It’s too hard.”



If a problem is worth
solving, it is worth walking
away from.



Walking Away from a Mathematics Problem Is OK

Providing students the autonomy and choice to learn when productive struggle becomes unproductive is a core teaching belief in the author's classroom. This article tells the story of one student's ability to know and express when his frustration was too great and how he chose to walk away from his work and return the next day.

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2

It's okay to not be finished
when math class ends.



**What Do You Notice?
What Do You Wonder?**



Main Question:

How Many Seats are on the train?



Estimates?



What Information Do You Need?



What Information Do You Need?



Be prepared to be surprised.



3

Your wonderings are important.



What do you notice?
What do you wonder?







4

You have important
mathematical ideas.



Story Problem Routine



Mr. Zak has 16 pieces of candy.

Ms. Claire has 9 pieces of candy.



Mr. Zak has 16 pieces of candy.
Ms. Claire has 9 pieces of candy.

How many more pieces of candy does
Mr. Zak have than Ms. Claire?



Routines That Get At Students' Important Mathematical Ideas:

- Number talks
- Splat
- Story problem routine
- How Many?
- Which One Doesn't Belong?
- Ways to Make _____
- Three Act Tasks
- Counting Collections
- Notice/Wonder



5

Play Matters.



Play is a particular *attitude* or *approach* to materials, behaviors, and ideas and *not* the materials or activities or ideas themselves; play is a special mode of thinking and doing.
(McLane, 2003)



Play generates situations where there
is no one 'right' answer.
McLane (2003)



Children who play together
learn to work together.





THANK YOU!

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