

# The Teaching and Learning of Mathematics is About Ideas

**ZACHARY CHAMPAGNE**

[zakchamp.com](http://zakchamp.com) |  [@zakchamp](https://twitter.com/zakchamp) | [zacharychampagne@gmail.com](mailto:zacharychampagne@gmail.com)



# A Disclaimer...



# Math Is For Everyone.



**It's Hard Work.  
But, I Will Keep Fighting.**



# How Do We Empower Our Kids to See Themselves as Math Learners?



**The Short Answer is...**

**It's Not Easy.**



**One thing is for sure.**

**It's NOT Done By Focusing  
On Right Answers.**



# The Teaching and Learning of Mathematics is NOT About Right Answers







## Tweet

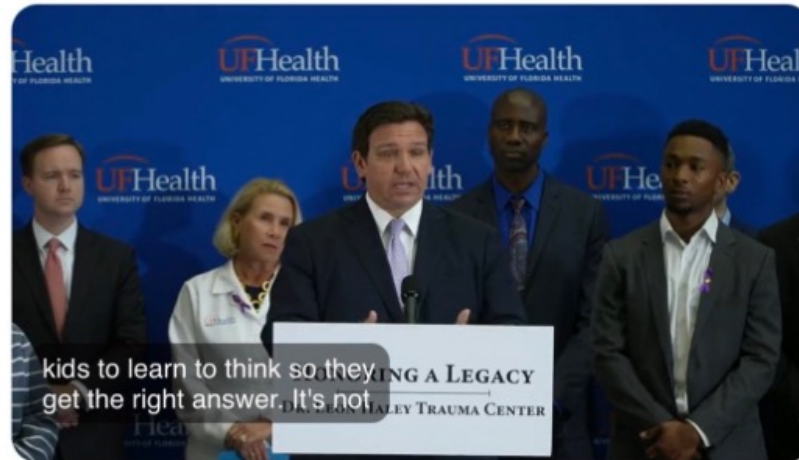
↻ Florida Department of Education Retweeted



**Ron DeSantis** ✓  
@GovRonDeSantis



Math is about getting the right answer,  
not about feelings or ideologies.  
In Florida, we will be educating our  
children, not indoctrinating them.



8:35 PM · Apr 20, 2022 from Florida, USA · Twitter for iPhone



**When my students are learning mathematics, the answer is less critical.**

**It only tells me one thing.**

**How a student arrives at that answer tells me LOTS of things.**



# Writing Instruction



# Math Instruction



**It's not about that piece of writing. It's about the writer.**

**It's not about that math problem, it's about the math learner.**



# How Do We Determine What Important Mathematical Ideas Our Students Have?



# 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?**



**Mr. Zak went to the farm. He saw that they were selling eggs by the dozen.**

**He bought 7 dozen eggs.**



**Mr. Zak went to the farm. He saw that they were selling eggs by the dozen.**

**He bought 7 dozen eggs. How many eggs did Mr. Zak buy?**



**It's Okay To Walk Away  
From a Math Problem.**



# McIntyre's Work



# McIntyre's Work



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



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





# It's Okay to Not Be Finished When Math Class Ends...



**The time we allot for a math lesson is arbitrary and is heavily dependent on the student's grade level, where they live, and what constraints are in place for the school.**



**Can you compose larger triangles  
with only triangles?**

**How many triangles did you use?**



**Can you compose larger rhombi  
with only rhombi?**

**How many rhombi did you use?**



# Your Students Will Surprise You..





Retrieved from [www.gfletchy.com](http://www.gfletchy.com)



ZAKCHAMP.COM



ZAKCHAMP

# How long to fill up the biggest pickle jar?





Retrieved from [www.gfletchy.com](http://www.gfletchy.com)







Retrieved from [www.gfletchy.com](http://www.gfletchy.com)





Retrieved from [www.gfletchy.com](http://www.gfletchy.com)



How long will it take to fill up the large jar?

I think it will take  
2 minutes to fill up the big jar  
because the little jar was 8 ounces  
and the big jar was 128 ounces so  
 $8 \times 8 = 64$   $16 \times 8 = 128$  ounces so  
so 16 times  $7.50 = 120$  and  $120 \text{ seconds} = 2 \text{ min}$



**What questions do you have for this student?**



I solved  
7.5 times  
16 by rounding  
7.5 to 8 which  
I already knew  
8 time 16  
equals 128  
but 128 minus  
.5 x 16 = 120



# What about Assessment?



A diagram consisting of three large circles arranged horizontally. The leftmost circle is yellow and contains the word 'Teaching'. The middle circle is teal and contains the word 'Learning'. The rightmost circle is orange and contains the word 'Assessment'.

Teaching

Learning

Assessment



Assessment

Learning

Teaching





A large yellow circle containing the word "Teaching" in white text.

Teaching

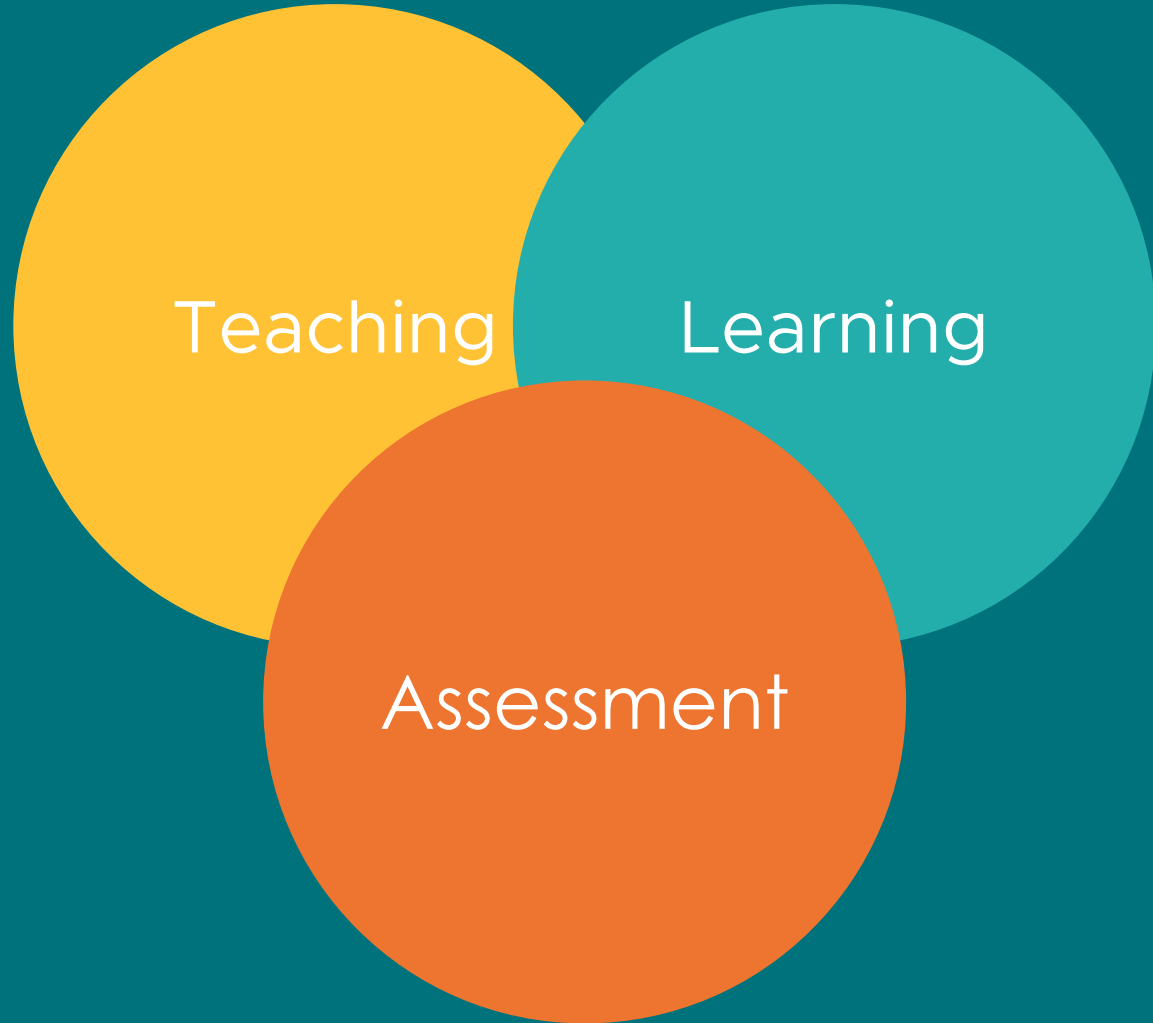
A large orange circle containing the word "Assessment" in white text.

Assessment

A large teal circle containing the word "Learning" in white text.

Learning







Teaching  
Learning  
Assessment



# The Teaching and Learning of Math is a Long Game



**I have to remind myself that I'm not aiming for a touchdown every time.**

**I'm aiming to keep my amazing kiddos moving forward. Each at their own pace.**





# THANK YOU!

**ZACHARY CHAMPAGNE**

**zakchamp.com |  @zakchamp**

***zacharychampagne@gmail.com***