

Measurement: It's not just for math class anymore!

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Who we are

▶ Tres Wells

- ▶ Middle School Teacher
- ▶ Albemarle County Public Schools
- ▶ Math Specialist Certified
- ▶ National Board Certified
- ▶ Experience teaching grades 5-12

▶ Justin Hose

- ▶ Elementary Math Specialist (K-5)
- ▶ Frederick County Public Schools
- ▶ PhD Candidate
- ▶ Performs Professional Development
- ▶ Teaches courses for teacher recertification
- ▶ Previous Experience as Fifth Grade Teacher

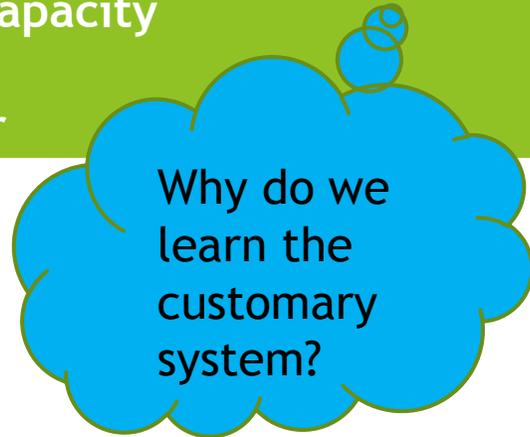
Objectives

- ▶ Identify Measurement SOL
- ▶ Examine reasons for teaching cross-curricular activities
- ▶ Apply math lessons in Language Arts, Science, and Social Studies

Measurement SOL

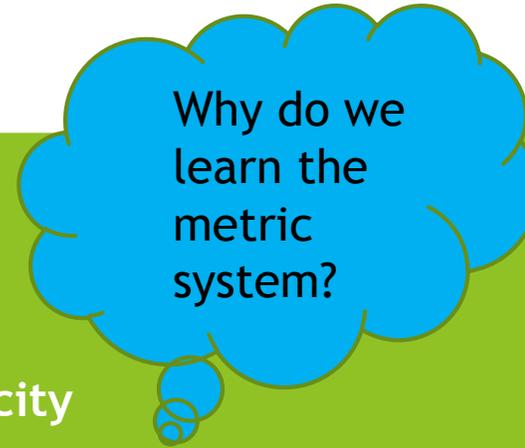
Customary

Money (Dimes, quarters, nickels, pennies, half dollars, dollars)
Time (seconds, minutes, hours, days, years, etc., elapsed time)
Length
Mass
Weight
Volume/Capacity
Area
Perimeter



Metric

Length
Mass
Weight
Volume/Capacity
Area
Perimeter



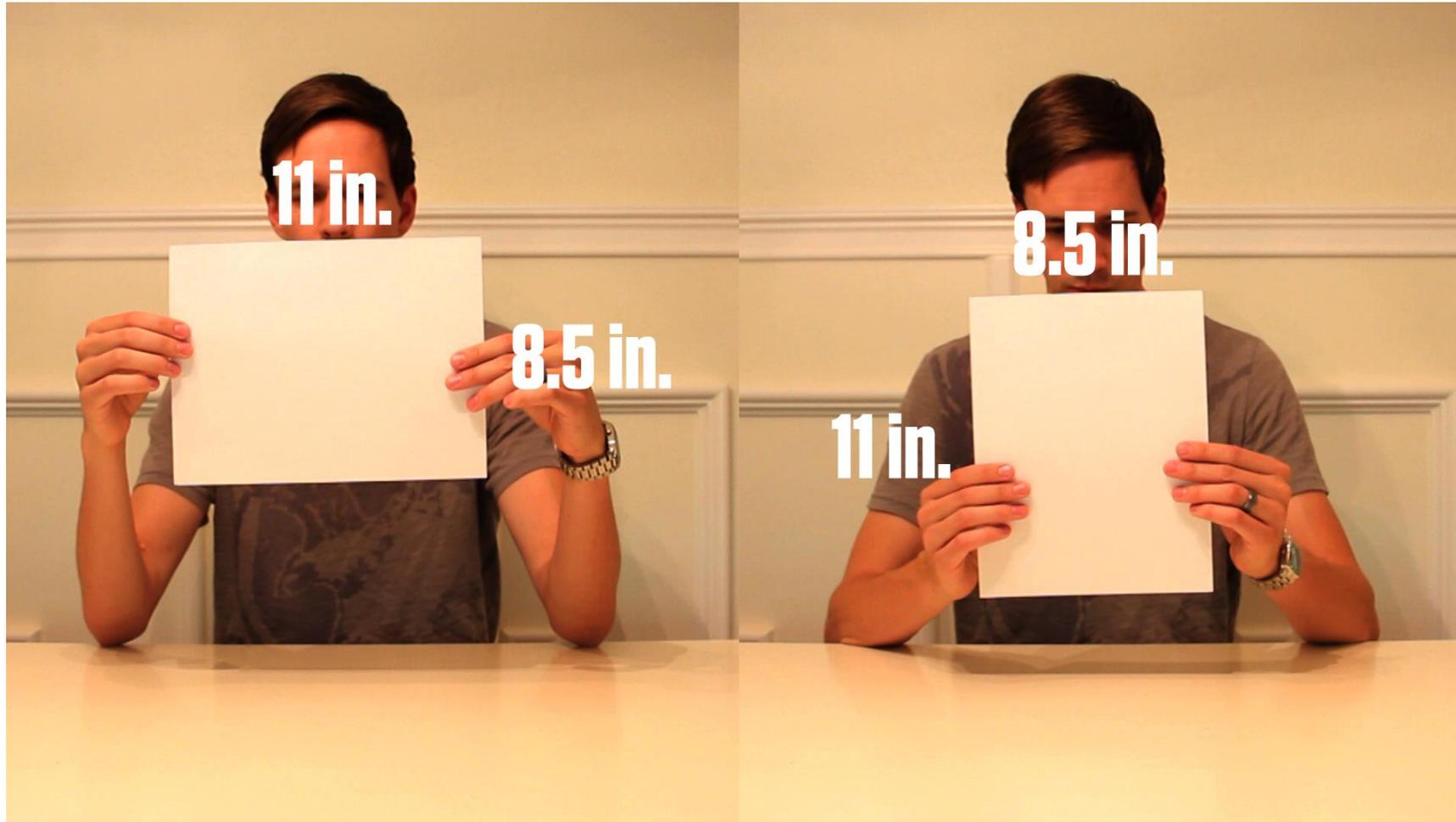
Why teach Cross-Curricular Lessons?

- ▶ **Connections**
 - ▶ Connects to students' prior knowledge
 - ▶ Makes the learning meaningful
 - ▶ Learning is not done in isolated subjects
- ▶ **Application**
 - ▶ Allows students to participate in applying concepts in different situations
 - ▶ Mirrors real world uses of academic knowledge
 - ▶ Think Da Vinci
- ▶ **Saves Time**

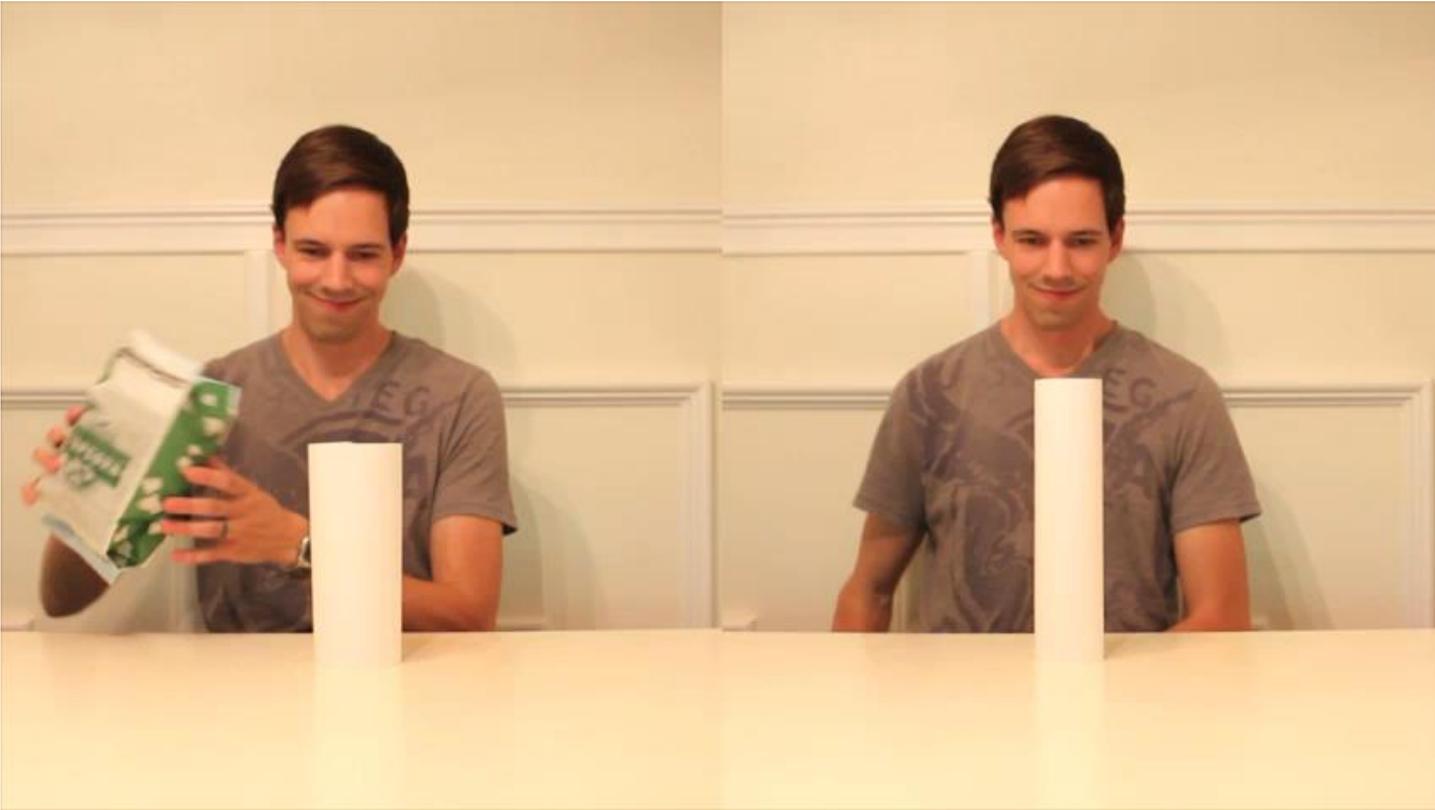
Compare and contrast



Compare and Contrast



Compare and Contrast



Shirt comparison



Estimation of Area

- ▶ Estimation Problems #1, Taken from Guesstimation by Lawrence Weinstein and John Adams
- ▶ Your response to this problem is due Monday, September 12. Use the Estimation Problem Template that can be found in Blackboard.
- ▶ If all the humans in the world were crammed together, how much area would we require? Compare this to the area of a large city, a state, or a small country, the U.S., Asia?
- ▶ How much area would we need if we gave every family a house and a yard?

Estimation Problems - Template

- ▶ Section 1 - Write down the question you are exploring.
- ▶ Section 2 - What information do you need to know to answer the question?
- ▶ Section 3 - Find the information you need and explain how you found it.
- ▶ Section 4 - Work through the solution. This section should be neat and organized. Mathematicians use many different tools to show their thinking, you may use the following:
 - ▶ Math Equations
 - ▶ Pictures
 - ▶ Diagrams
 - ▶ Tables
 - ▶ Charts
 - ▶ Graphs
 - ▶ Sentences.
- ▶ Section 5 - Provide your answer to the questions and explain your rationale (why does this answer make sense?)

Science, Language Arts, Social Studies, and Math

- ▶ Weather Unit
 - ▶ Temperature
 - ▶ Time
 - ▶ Wind speed
 - ▶ Humidity
 - ▶ Precipitation
 - ▶ Air Pressure

Rain Gauge

- ▶ On a rainy day place a rain gauge outside at 9:45 am. Check how much rain fell at 12:00 pm. Check to see how much rain fell at 1:40. Finally see how much rain fell at 3:00.



Cause and Effect

- ▶ How does the height of dropping a ball effect the height of the bounce?
 - ▶ Drop from 10 cm
 - ▶ Drop from 50 cm
 - ▶ Drop from 75 cm
 - ▶ Drop from 100 cm
 - ▶ Drop from 150 cm

Contact Us

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