Slide 1

Measurement & Data in Elementary School
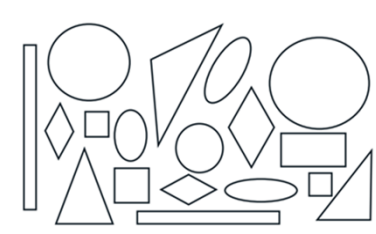
Grades K-5

3"
4"

Chris Shore
The Math Projects Journal
Murrieta Valley USD, CA

@MathProjects

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Slide 2
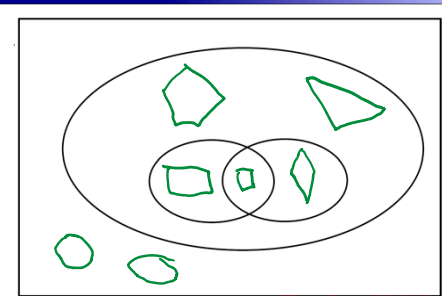
What's My Shape?

Inspired by K-5 Learning

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Slide 3

What's My Shape?

How does this help understanding of attributes?

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Slide 4

The Units Conjecture

Make an argument about how units of measure effect the measurement of something.

We are going to measure the length of an object twice using units of different lengths for the two measurements.

1) How might the size of the unit effect the 'number' of the measurement?

2) As a group, decide whose argument you want to test.

3) Measure the length of an object twice, using units of different lengths for the two measurements.

4) Decide if your argument was correct.

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Slide 5

The Units Conjecture

Make an argument about how units of measure effect the measurement of something.

Complete the following conjecture on how the size of the unit of measure affects the size of the value of the measure.

When measuring an object, a bigger unit of measure will result in _____**smaller**_____ value of measurement.

How does this help understanding of measurement?

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Slide 6

Less Than a Foot

You and your group members each are to measure the length of a different object. Your object must be less than a foot long. Within your group, there must be at least one object which has a length, measured in inches, that is a whole number, another that includes a half, and another that includes a fourth.

Group Member's Name	Object Measured	Length (inches)

How does this help understanding of measurement?

What questions could you ask from this dot plot?

0 1 2 3 4 5 6 7 8 9 10 11 12
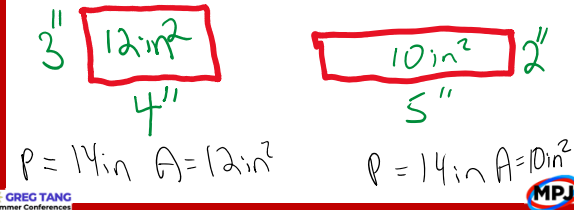
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The Rectangle Conjecture

Jose's conjecture:
Two rectangles that have the same perimeter can have different areas.

If you think Jose is correct, draw to scale (in inches) two rectangles that support his claim. If you think he is incorrect, show or explain why.
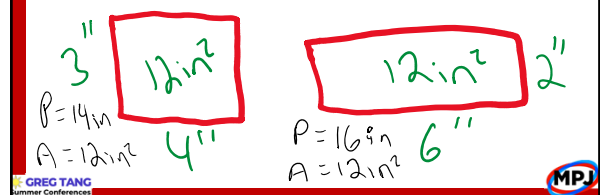
(handwritten) 3" 12in² 4"   10in² 2" 5"

P = 14in A = 12in²   P = 14in A = 10in²

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The Rectangle Conjecture
(cont'd)

How does this help understanding of measurement?

Claudia's conjecture:
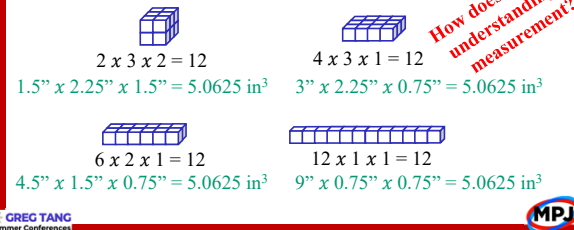*Two rectangles that have the same area can have different perimeters.*

If you think Claudia is correct, draw to scale (in centimeters) two rectangles that support her claim. If you think she is incorrect, show or explain why. .

(handwritten) 3" 12in²   12in² 2"
P = 14in A = 12in² 4"   P = 16in A = 12in² 6"

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Clay Boxes

Given 12 unit-cubes, create as many different rectangular prisms as you can. For each one, write the equation, *l x w x h = V*, substituting your values for length, width and height, measured in inches. (round to the nearest quarter inch)
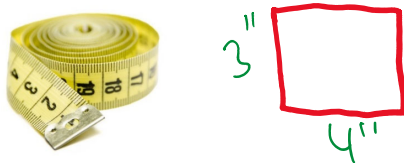
How does this help understanding of measurement?

$2 \ x \ 3 \ x \ 2 = 12$
1.5" x 2.25" x 1.5" = 5.0625 in^3

$4 \ x \ 3 \ x \ 1 = 12$
3" x 2.25" x 0.75" = 5.0625 in^3

$6 \ x \ 2 \ x \ 1 = 12$
4.5" x 1.5" x 0.75" = 5.0625 in^3

$12 \ x \ 1 \ x \ 1 = 12$
9" x 0.75" x 0.75" = 5.0625 in^3

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Measurement & Data
in Elementary School

SEPTEMBER

ACT NOW

2-Week Rule

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Teach Measurement & Data
in Elementary School…

**…with the faith that they can learn it,
and that we can teach it to them,**

(handwritten) 3"   4"

**…so you can change this world,
one math lesson at a time.**

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