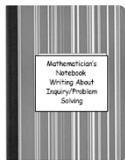


The Mathematician's Notebook



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What is it?

- **An adaptation of the Scientist's Notebook:**
 - East Bay Educational Collaborative
 - <http://ebecri.org/content/toolkit>

Prior information

***Using the Mathematician's Notebook* program available on the ITSC K-12 program archive:**

http://itsc3.fsa.mtsu.edu/itsc/livewebcast/demographic_information.aspx?id=189

Let's Begin

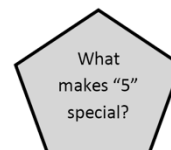
- **Materials:**
 - Notebook
 - Post-it® notes
 - Scissors
 - Tape, glue
 - Handouts

K - 2

- **Materials:**
 - Open question picture for every student
 - Finish the pattern for every student
 - Glue sticks
 - Pattern blocks

K - 2

- **Number Sense**
 - Open Questioning....

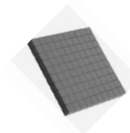


K - 2

- **Pattern sense**
 - Finish the pattern

**3 - 5**

- **Materials**
 - Base Ten Materials
 - Base Ten Mat
 - Pair of number cubes for each pair of students
 - Lab sheet for each student
 - Patty Paper®
 - Compass or circle template

**3 - 5**

- **Place Value**
 - Partner A rolls the number cubes.
 - Model the number rolled with your base ten materials
 - Partner B rolls the number cubes.
 - Model the number rolled with your base ten materials.

**3 - 5**

- **Now make trades to find the sum.**
- **Record the sum on your lab sheet.**

| Numbers Rolled | Tens | Ones | Addition expression | Sum Made | Trades Made | New Sum Made | Addition problem with SUM |
|----------------|------|------|---------------------|------------------|-------------------|-----------------|---------------------------|
| 2 and 6 | 2 | 6 | 2 tens + 6 ones | XXXXXXXXXX | XXXXXXXX | XXXXXXXXXXXX | XXXXXX |
| Numbers Rolled | Tens | Ones | XXXXXXXXXXXX | 5 tens + 11 ones | 10 ones for 1 ten | 6 tens + 1 ones | 26+35=61 |
| 3 and 5 | 3 | 5 | 3 tens + 5 ones | XXXXXXXXXXXX | XXXXXXXX | XXXXXXXXXXXX | XXXXXX |

3 - 5

- **Geometry**
 - Developing the formulas for the area of 2-D figures
 - Area of Circle with Patty Paper®

6 – 8

- **Materials:**
 - Set of Curves for Number sets
 - Post-it notes
 - Glue sticks/tape

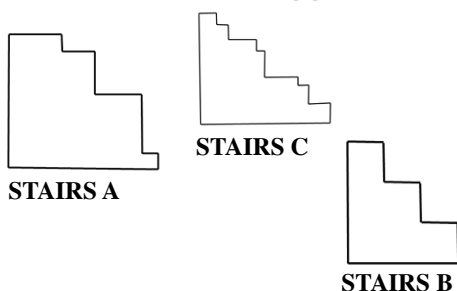
6 - 8

- Applications of Proportionality
 - Slope

Slope

- What does that word make you think of?
- What other words do you know that are linked to this word?

What would happen...



6 - 8 / 9 - 12

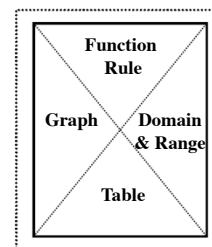
- Number Sets
 - Use your curve shapes AND the other resources available to you to model the Real Number System!

9 - 12

- Materials
 - Four-Fold notes
 - Tape/glue stick

Functions

- Four Fold Notes
 - Cut on dotted lines
 - Tape on spotted lines
 - Label top around clockwise
 - Function Rule
 - Domain & Range
 - Table
 - Graph



Investigation

- Using the function:

$$f(x) = 2x + 1$$

Put the appropriate information on
the page under each flap...

Q & A

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