

Mathematical Modeling to Make Thinking Visible

PROFESSIONAL LEARNING

K TO ALG1 CCSS

1 TO 3 HOURS



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Model to Make Thinking Visible in Linear Relations and Slope in "STEAM" Gr 6 to Algebra1

We will model blended learning in diverse learning environments (computer/manipulative/paper) and offer 3 part lessons to "grapple", "see" solutions and construct understanding in Slope and Linear Relationships. Access will be given to a computer program and 3 part lessons.

Model to Make Thinking Visible in Addition with Regrouping, Fraction Multiplication and Partial Products Gr 2 to 6

We will model blended learning in diverse learning (computer/manipulative/paper), offer 3 part lessons to "grapple", "see" solutions and construct understanding in Addition with Regrouping, Fractions and Partial Products. Access will be given to a computer program and lessons.

THE LEARNING ENVIRONMENT

CORE & INTERVENTION

The Learning Pit
A Model for a Growth Mindset

Grappling is.. more than "persevering"
.. more than "engaging"
.. "productive struggling"

Concrete to Pictorial to Abstract

Build it - Draw it - Talk it - Write it - OWN it!!

A MISTAKE IS AN OPPORTUNITY TO LEARN

Multiple Representations

<http://www.jamesnottingham.co.uk/learning-pit>

LOGIN

For 1 month: www.umathx.com/preview Login: **count** Generic Password: **umathx**
After 1 month: www.umathx.com and select **Preview** to set up your own access.

3 PARTLESSONS (FRAMEWORKS)
WWW.UMATHX.COM
RESOURCES

- | | |
|--|---|
| 1. Creating & Interpreting Line Graphs (STEAM) | 1. Add 2 Digit Numbers With Regrouping |
| 2. Slope in the Real World | 2. Fraction Introduction – Pattern Blocks -1 (RTI) |
| 3. Linear Relations – Elastic (STEAM) | 3. Multiply Two 2-Digit Numbers – Partial Products |
| 4. Slope and the Line – Walk in Real World -1 (RTI) | 4. Multiply Proper Fractions |

MENUS: CURRICULUM CONTENT

- 2.NBT.02.05 – Operations>14) Add 2 Digit ... Concretely-> C -> **Addition With Regrouping**
- 3.NF.01.01 – Fractions> The Meaning of Fractions> Introduction...Think, Write, Say> **Circles – Pattern Blocks - RTI**
- 4.NBT.02.05-Whole#&Int>Mult&Div Whole Num>Multby2Digit Mult>Partial Prod-Area>Ex 1–With Blocks(24x37) then> Ex 4–Without Blocks(24x37)..then 6.NS.02.03-Fract>Mult&Div Dec>Mult PartialProd>Ex1-With Blk(2.4x3.7)
- 5.NF.02.04a – Fractions> Multiplying Fractions> Developing the Rule> **Ex. 3 – Proper FractionXProper Fraction**
- 6.RP.01.03b – Fractions>Ratios & Proportions>Ratio,Tape Diagram>**Introduction & Ratio Table>Introduction1,2**
- 8.EE.02.05-Graphing>Slope of a Line> Introduction to Slope & Slope>**Steepest Factor**
- 8.F.02.04 –Graphing> Linear Relations> The Elastic Example> **Setup Equations AND THEN Graph - STEAM**
- 8.F.02.04 –Graphing> Equation of a Straight Line > Word Problems-Applications> **The Walker> Same Speed - RTI**
- 8.F.02.05 –Graphing>Reading & Sketching Graphs>Graphs Without A Scale> Ex 7, 9, 11>**Glasses of Water + RTI**