

Building Understanding in Mathematics

Proposals for Symposiums/Webinars www.umathx.com

PROPOSAL 1: SESSION | Grades 5-9 | Preservice |

Math or Magic ?

Empower Students in Algebraic Thinking by Explaining Number "Tricks"

We will explain number "tricks" through a sequence of lessons based on mathematical thinking from **Words to Algebra Tile Models(Pictures) to Algebraic Expressions**. Learning environments include digital and paper activities. Participants will receive access to exciting online resources and lessons.

PROPOSAL 2: SESSION | Grades 6-12, Preservice |

Brunch on a RATIO MIX of Cranberry Juice & Gingerale 'n Learn



Have brunch with us by exploring mixtures of *Cranberry Juice and Ginger Ale*. Mathematics Standards emphasize understanding ratio concepts, analyzing proportional relationships and using them to solve real-world, mathematical problems, especially on the middle school level. Learn by "tasting" our 3-part lessons on: Tape Diagrams, Ratio Tables, Double Number Lines, Scale Diagrams, Dilations, Slope. Participants will be given access to lessons both online and in print.

PROPOSAL 3: SESSION | Grades 2-6 | Preservice |

Empower Them : TEACH the Math ... don't ... TELL the Algorithm

We will empower attendees and their students to help build understanding through visual digital approaches and 3-part lessons on paper and demonstrate relevant ideas briefly for each of the following key concepts. 1. Add 2 digit numbers with regrouping; 2. Fraction Introduction; 3. Multiply 2 digit by 1 digit.; 4. Multiply fractions; 5. Decimal addition; 6. Area scaffolding from rectangle to triangle to parallelogram to trapezoid. Participants will receive access to all online and paper resources discussed



PROPOSAL 4: SESSION | Grades 3-6 | Preservice |

MULTIPLE APPROACHES to UNDERSTAND Whole Numbers & Fractions computer ... paper ... manipulatives ... games

Come help students to develop a **deeper understanding of FRACTIONS and WHOLE NUMBERS** through a wide variety of enjoyable learning environments. **LEARN** through concepts presented visually **online, on paper, with manipulatives and REINFORCED with games**. Concepts come to life when you engage your mathematical mind to explore all possibilities. Participants will receive access to online resources, lessons and games.



PROPOSAL 5: SESSION | Grades 3-6 | Preservice |

FRACTIONS to DECIMALS ... Build it, Draw it, Talk it, Write it - to- OWN IT

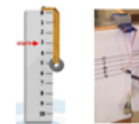


Visualize and Learn through lessons online, on paper and manipulatives to UNDERSTAND the concepts. Learning will be constructed through a sequence of topics. Participants will receive access to online resources and lessons for their classes.

PROPOSAL 6: SESSION | Grades 5-10 | Preservice

3 Models of STEAM in Middle School will make thinking visible through details online, on paper and in the real world.

- >> Interpret the slope and the y intercept within linear relations in order to understand, "Walks in the Real World".
- >> Graphs of Linear Relations model results of weights on an elastic.
- >> Graphs without a Scale model water poured into containers.



PROPOSAL 7: SESSION | Grades K - 6 | Preservice

Coding Introduction Opportunity for Mathematics Innovation

In a hands on session, we provide and introduce an intuitive, simple coding language, Logo, designed specifically for young learners. The code and our lessons provide an innovative, exciting tool for teaching mathematics.

