



Making Foldables with Preservice Teachers

Alamo Colleges:

Honey Kirk, Palo Alto College

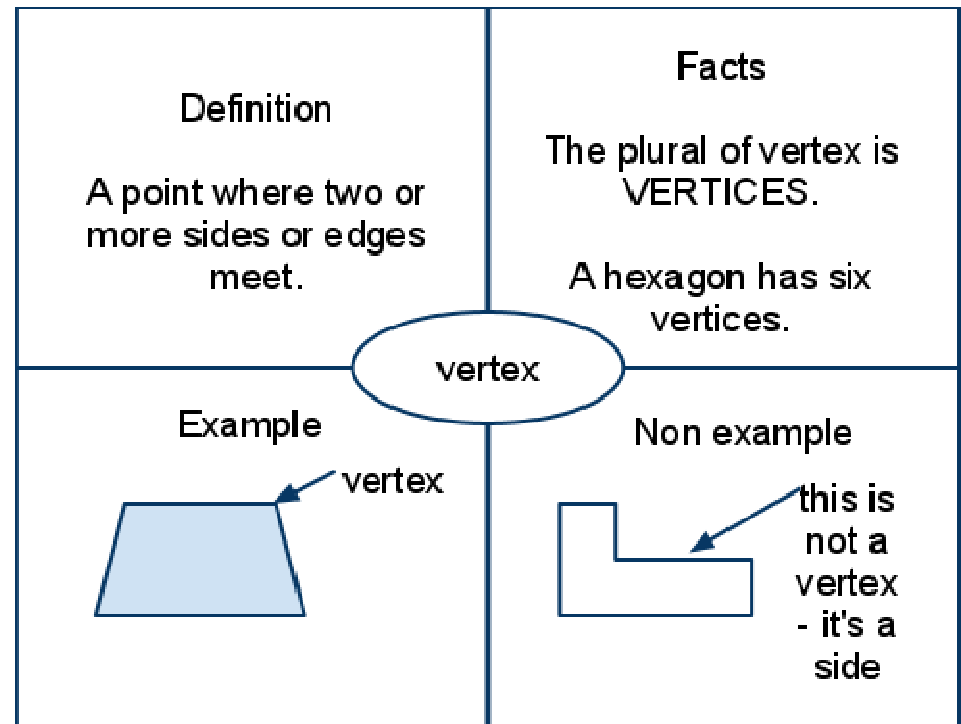
Dr. Heidi Hunt-Ruiz, Northwest Vista College

Dr. Mary Zocchi, Northwest Vista College

How we started

- In the elementary classroom, 2001

- In the college classroom, 2011



Grounded in research

- NCTM (Process Standards)
- State Standards (CCSSM)
- Neuro-Developmental Functioning (Levine)

Higher Order Cognition

- Applied Reasoning
- Rule Understanding Use
- Concept Formation and Linkage

Attention

- Previewing / Estimation
- Self-Monitoring / Pacing
- Focus on Detail

Mathematical Proficiency

Language

- Semantics
- Symbolization
- Sentence Comprehension






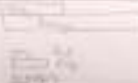



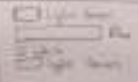



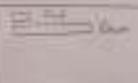
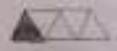
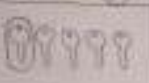

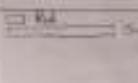
Memory

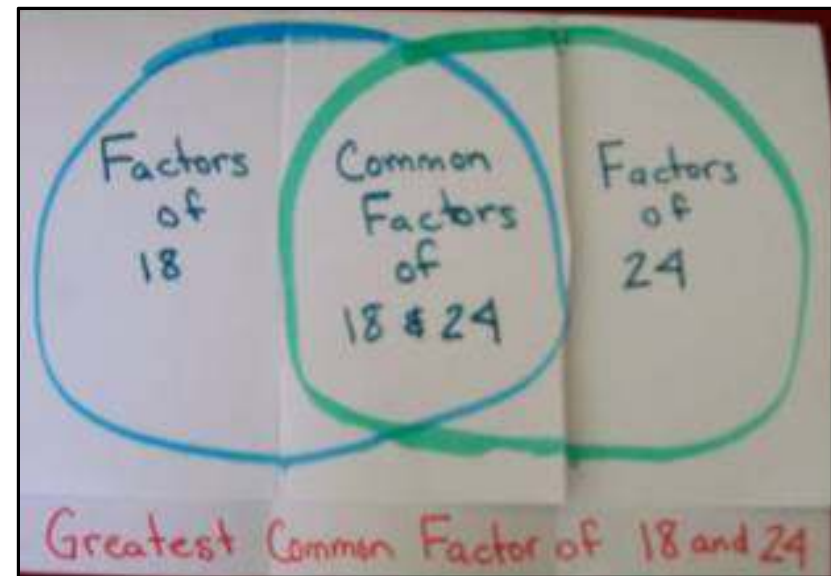
- Pattern Recognition
- Procedural Recall
- Sequential Memory
- Factual Recall
- Active Working Memory

Spatial Ordering

- Geometric Perception
- Graphic Representation
- Visualization / Mental Imagery

What is a foldable?

Fraction Manipulatives				
Fraction	Picture (100)	Fraction Circle	Concrete	Felted Model
$\frac{1}{2}$	Any fraction of a whole 			
$\frac{1}{4}$				
$\frac{1}{3}$				
$\frac{1}{4}$				
$\frac{1}{5}$				



Feedback

“This gives students a schematic, which is how the brain works. This is an efficient study tool that provides students with an organized way to think about the content.” Professor

Preservice Teachers:

“It helps me learn the material.”

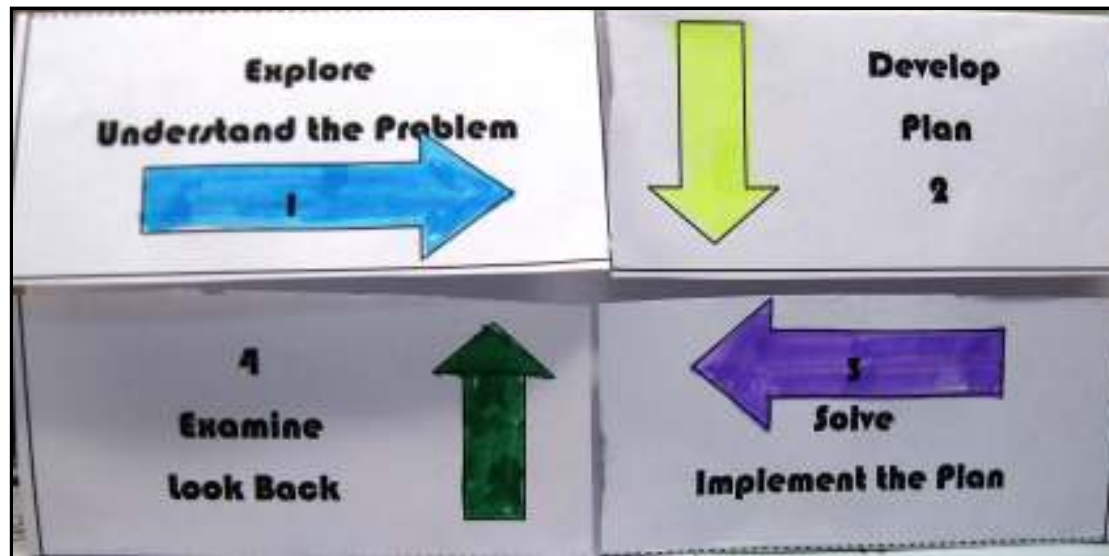
“Can’t wait to use foldables in my future classroom!”

“This will be a helpful study tool for the ExCet Exam.”

“Making foldables helped me see how this material could be presented in an elementary classroom.”

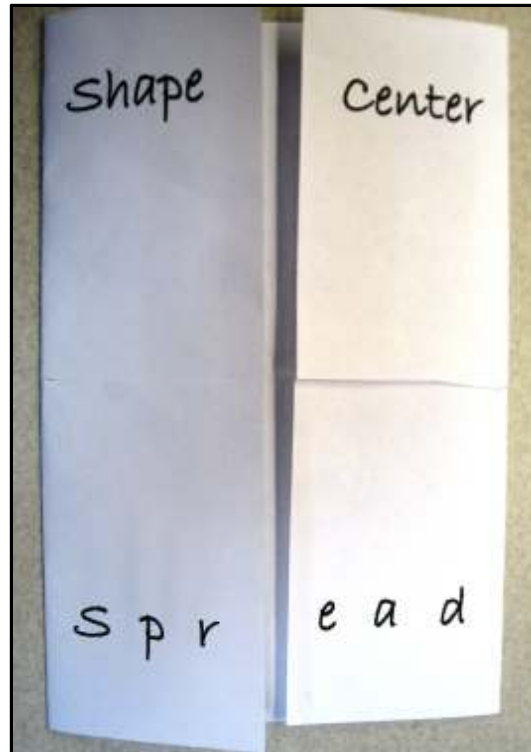
Let's Make Foldables!

Problem Solving



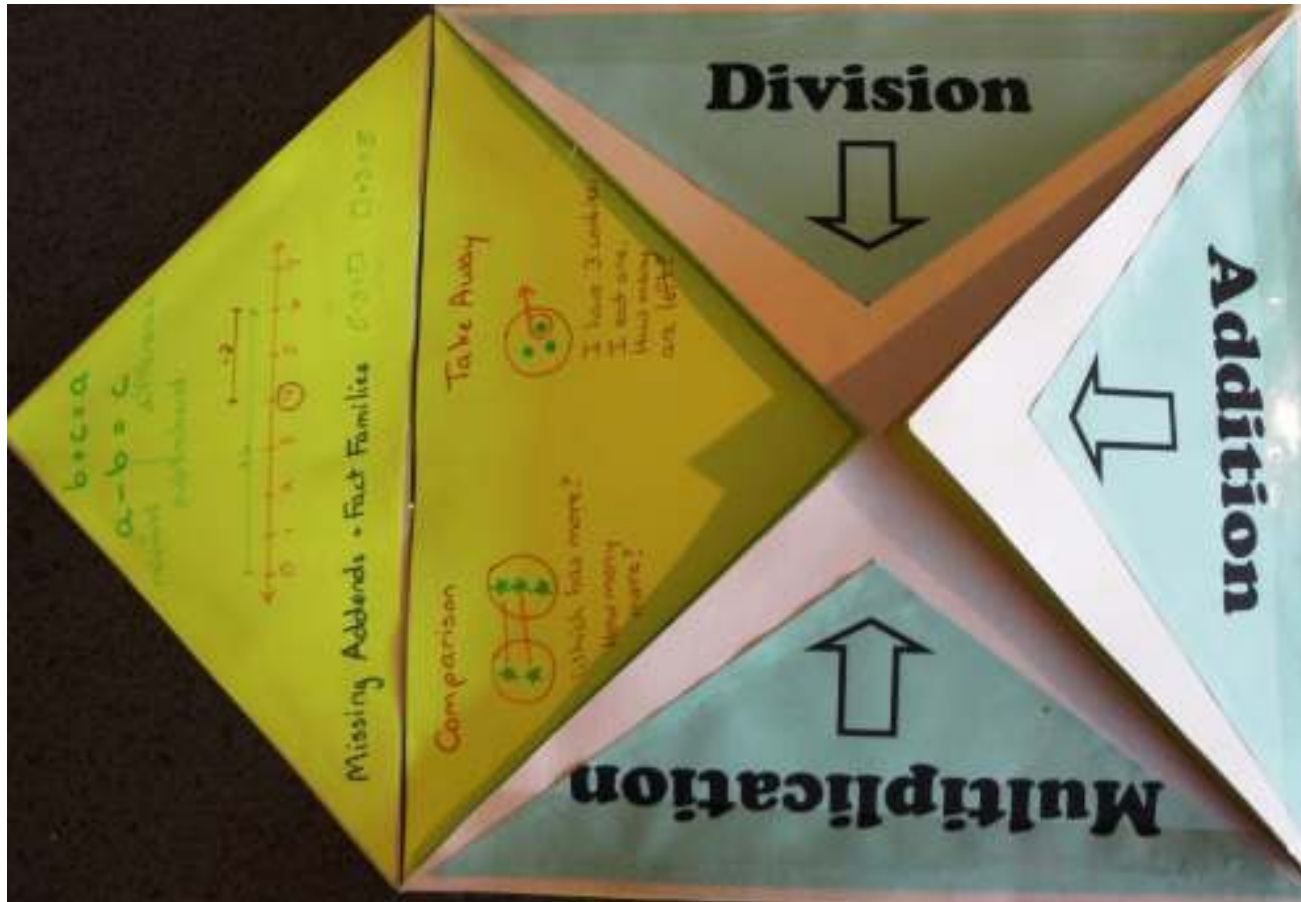
Let's Make Foldables!

Central Tendency / Spread



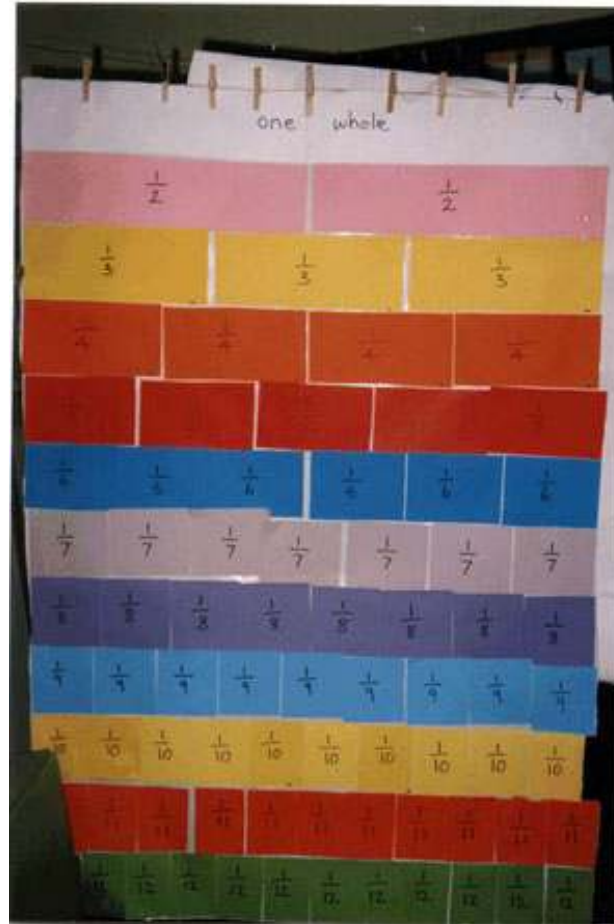
Let's Make Foldables!

Whole Number Operations



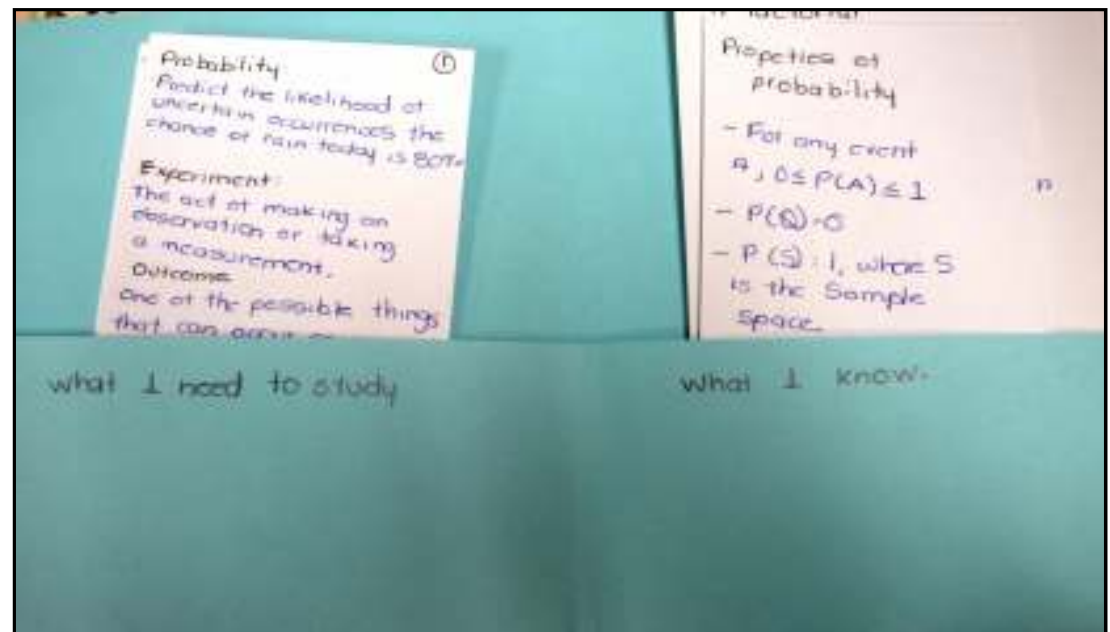
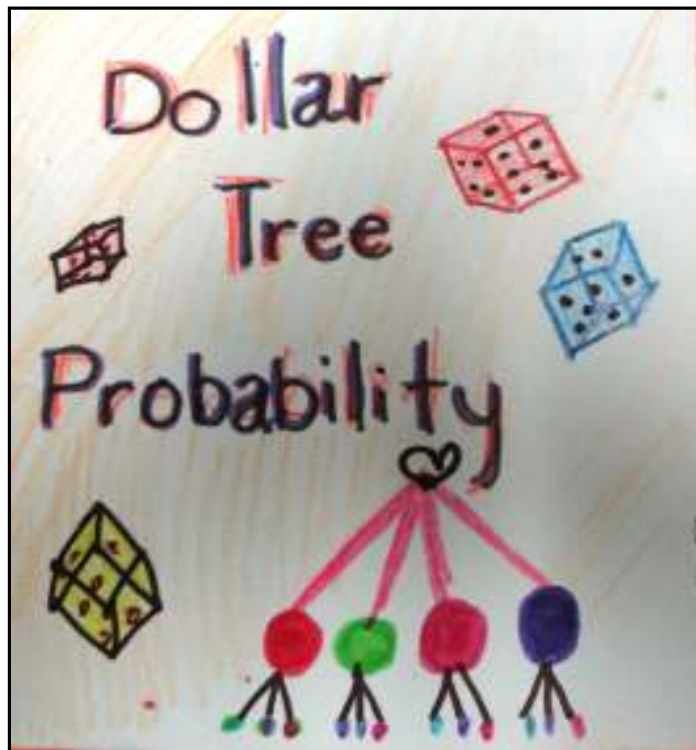
Let's Make Foldables!

Fraction Wall



Let's Make Foldables!

Probability Study Cards



What we've learned...

- Ensure student information is written correctly
- Should be more than note-taking
- Should include visual and summative info
- Feedback is helpful (ensure students are making correct connections)
- Allows testing higher order thinking

Foldable topics

- Problem solving
- Venn diagram / Sets
- Whole number operations
- Whole number algorithms / conceptual models
- Divisibility
- Integer operations
- Fraction wall
- Ratios/Proportions
- Data displays
- Statistics
- Probability
- Geometry
 - Vocab
 - Formulas

Wrap-up

- Questions?
- Comments?
- Concerns?



More feedback

- *“I loved it! It allows the students to do a hands on activity, and they can also visualize and create the fractions with their foldable.”*
- *“It helps unorganized people be organized with their notes.”*
- *For those of us who learn visually and hands-on, this method targets that. We hear it, translate it into our own words, then draw it.”*

- *“They allow for organization of the material. They group relevant information together and for me, make the information easier to grasp.”*