



## CRA Instructional Sequence

- **Concrete** teaches the concept
- **Representational** provides practice and makes memorable
- **Abstract** calculates with numbers and symbols

## Venn Diagrams and the Inclusive “OR”

- Do you like ice cream or lima beans?
- Do you like cabbage or candy?
- Do you like supervising lunch detention or grading exams?

## Venn diagrams

**Concrete:** construct diagrams using attributes of class (sports, where are our grandparents, clothing, etc )

**Representational:** Shade regions “and”, “or”, “not”

**Abstract:** Analyze diagrams with numerical values

## Determining Truth Values & Truth Tables

- **Concrete/Kinesthetic:** double-sided markers replace T and F (handout)
- **Representational:** code with color and symbols
- **Abstract:** symbols only

# Conditional Statements

Language:

*Conditional*

*Converse*

*Inverse*

*Contrapositive*

# Conditional Statements

- Construct conditional using index cards and foam
- Write out the compound sentence
- Code the sentences for  $p$  and  $q$
- Write in symbols
- Code and then write the truth value

# Modus Ponens and Modus Tollens

- Coding the statements aids in pattern recognition
- Code each statement ( $p, q, \sim q$ , etc) and conclusion
- Look for pattern of MP or MT

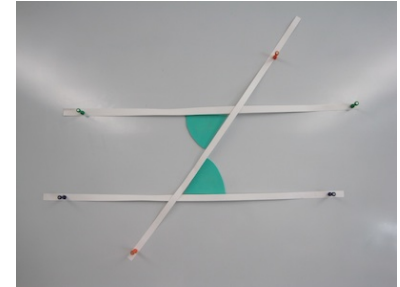
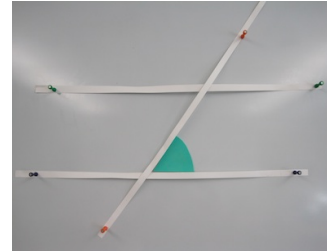
# Visual Theorem bank

	$m\angle DBA + m\angle ABC = m\angle DBC$
Complement Theorem	<p>complementary angles</p> $m\angle 1 + m\angle 2 = 90^\circ$
Def of Linear Pair	<p>A pair of adjacent angles whose non-common sides are opposite rays</p>
Supplement Theorem	<p>supplementary angles</p> $m\angle 1 + m\angle 2 = 180^\circ$
Vertical Angles Theorem	<p>Two nonadjacent angles formed by two intersecting lines.</p> <p>Vert <math>\angle</math>'s are <math>\cong</math></p> <p><math>\angle 1 \cong \angle 3</math> - vertical angle <math>\angle 2 \cong \angle 4</math></p>
Definition of Angle Bisector	<p>A ray that divides an angle into two congruent angles.</p>

## Parallel Lines and Transversals

Interior	Exterior
Transversal	Alternate & Same Side
Vertical	Corresponding
Linear Pair	

## Concrete: Discovering Angle Relationships



**It really is all about the language..**

*Vocabulary Development Activities*

**Hit my Rhombus  
One more Time**

**Nadia Carrell, PhD**  
ncarrell@asdec.org

The Multisensory Training Institute of  
ASDEC Rockville MD  
www.asdec.org