

# Number Sense Remediation in the Upper Grades

## How does weak number sense appear in our students?

- Difficulty with...
  - 4 basic operations
  - Differentiating between types of problems & identifying appropriate procedures
  - Place Value
  - Time & Money - telling time, passing time, making change, discounts
  - Fractions, decimals, percents
- Inability to identify whether answers “make sense”
- Lack of awareness about patterns between numbers
- Lack of awareness about connections between topics
- Difficulty following process/procedure without explicit notes and models
- Low math-esteem, general dislike for math
- Behavioral issues in math class

## How to identify gaps

- Diagnostic Interviews (verbal)
  - Past math experiences & attitude toward math
  - Mathematical questions (to be answered verbally and/or with manipulatives)
- Diagnostic Assessments (written)
  - Test basic math skills (place value, rounding, money, time, etc.)
  - Test problem solving & flexible thinking skills

## How to provide remediation

- Interactive notebooks as a resource/reference
- Videos for HW help
- Have students TALK about math
  - Use specific mathematical vocabulary
  - Justify their reasoning
  - Explain their thinking
- Repeated exposure/Spiraling back
  - weekly warm-up sheets & HW sheets
  - bi-weekly review packets
- Number of the day/target number activities
- Use manipulatives to help students develop strong mental images
- Basic math “in the world” activities

## Helpful Hints

- Connect # sense skills to life skills
- Estimate before calculate

## Number Sense Skills to Assess for:

- Counting
  - evens/odds
  - patterns
  - skip counting
  - Forward and backwards
- Place value
  - Reading numbers
  - Words vs. numerals
- Rounding
  - Decimals
  - Whole numbers
- Fact families
  - addition/subtraction
  - multiplication/division
- Basic fractions
  - Identifying from drawings
  - Ordering/comparing
  - Operations
- Money
  - Counting coins & bills
  - Making change
  - Applying discounts
  - Estimating costs
- Time
  - Telling time
  - Elapsed time
  - Predicting time
- Ordering & Comparing Numbers
- Recognizing reasonable answers
  - “Does that make sense?”
- Flexible thinking/problem solving
- Ability to differentiate between types of problems