

**Marsh Valley School District**  
**Quick Reference Curriculum Guide**  
**2<sup>nd</sup> Grade/Mathematics**  
**August 2004**

Skills are identified with Introduced (I), Practiced (P), Mastered (M)

**Mathematical reasoning and Problem Solving**

**Problem Solving**

- Solve grade appropriate problems. (M)
- Use manipulatives and real world experiences to identify and solve problems. (P)
- Apply four step problem solving process:
  - Understand
  - Plan
  - Solve
  - Look back
- Apply a variety of strategies to solve problems: (P) **277.01**
  - Choose an operation
  - Act it out
  - Use a pattern
  - Make a model
  - Draw
  - Guess
  - Test
  - Logical reasoning
  - Table/list
  - Work backwards (P)

**Story Problems**

- Model and solve real world and story problems using number sentences to describe the situation. (P) **278.02.a**
- Solve addition and subtraction story problems. (P)
- Identify extra or missing information in story problems. (P)

**Reasoning**

- Use estimation to predict/evaluate problem solving. (P)
- Decide when to use:
  - Paper/pencil
  - Mental math
  - Calculators

**Mathematics Processes**

**Communication**

- Use appropriate vocabulary. (M) **277.-283.**
- Express mathematical ideas using: (P) **278.04.a**
  - Words
  - Numbers
  - Symbols
  - Tables
  - Charts
  - Graphs
  - Diagram
  - Models
- Make generalizations and justify conclusions. (P)
- Work in cooperative groups listening and discussing possible solutions. (P)
- Explain how numbers relate to real world situations. (P)

**Number Sense**

**Whole Numbers/Place Value**

- Build number facts to 18. (M)
- Solve missing addend problems. (M)
- Memorize addition/subtraction facts through 10. (M)
- Estimate and solve 2-digit addition/subtraction problems with and without regrouping. (M) **277.02.b**
- Apply knowledge of estimation in different situations. (P)
- Explore and apply the concept of part-part-whole using: (P)
  - Manipulatives
  - Models
  - Symbols
- Knowledge of numbers 1-1000 (M) **2377.01.a.b**
  - Read
  - Write
  - Order
  - Compare
  - Place value

- Demonstrate knowledge of numbers by counting in a variety of ways: (M) **277.01.a**
  - Count backwards from 20
  - Skip count by 2's
  - Skip count by 5's
  - Skip count by 10's
- Demonstrate ability to read number *words* in the 100's. (I-P)
- Identify place value to the hundreds place. (I-M)
- Apply numerical patterns for numbers through the hundreds place. (M)
- Demonstrate proficiency with addition and subtraction: (M) **277..02.a.b.c.d**
  - Demonstrate proficiency with addition and subtraction facts through 18.
  - Add whole numbers with and without regrouping through 99.
  - Add a series of one-digit addends.
  - Explore double-digit subtraction of whole numbers
- Compare and order numbers to 100 using the vocabulary: (M) **280.01.c**
  - Greater than
  - Less than
  - Equal to
  - Before
  - Between
  - After
- Demonstrate knowledge of even/odd. (M)
- Extend patterns and identify the rule (function) that creates the pattern. (I-P) **283.01.a**
- Sort and classify objects by more than one attribute. (P) **283.01.b**

**Money**

- Identify the coin and its value for: (M) **277.01.d**

- Penny
- Nickel
- Dime
- Quarter
- Half dollar
- Dollar

□ Count the value of money up to a dollar. (M) **277.01.d**

□ Express money in words and numerals using decimal notation

□ Solve grade appropriate money problems.

**Concepts/Language of Algebra, Functions, and Mathematical Models**

□ Select strategies/operations to solve math problems. (M) **278.01.a.b.**

□ Generate a number sentence from a problem-solving situation. (M) **278.02.a 280.01.b**

□ Represent vertical notation in horizontal form and vice versa. (M) **280.01.a**

□ Understand the relationship and demonstrate the inverse of operations in: (I-P) **280.01.d**

- Addition
- Subtraction

□ Explore and use the commutative property of addition. (I-P) **280.02.a**

□ Translate patterns to symbolic form. (M)

□ Reproduce, create, describe, and extend geometric and numeric patterns. (P)

**Measurement**

□ Explore and apply the standard and non-standard tools for: (P) **279.01.a.b**

- Time
- Length
- Volume
- Weight
- Temperature

□ Tell time using both digital and analog clocks for: (M) **279.01.c**

- Hour
- Half-hour
- Quarter hour
- By minutes

□ Understand span of time: (M)

- Seasons

- Yesterday, today, tomorrow
- Days, months (recite)
- Calendar
  - Events
  - Dates
  - Days

**Geometry**

□ Recognize, name, build, draw, compare, and sort two and three-dimensional shapes. (P)

**281.01.a**

□ Recognize and create shapes of symmetry. (P) **281.01.b**

□ Explore slides, flips, and turns. **281.01.c**

□ Apply graphing in two dimensions. (I-P) **281.02**

□ Apply ideas about direction and distance. (P) **282.02.a**

**Data Analysis, Probability, and Statistics**

□ Interpret/gather/use the information found in: (P) **282.01.a 282.02.a**

- Simple tables
- Charts
- Graphs

□ Predict, perform, analyze, summarize, draw conclusions, and record results of simple probability experiments and make decisions based on the results. (I-P) **282.03.a 282.04.a**

□ Create grade appropriate graphs and: (P)

- Develop
- Interpret
- Collect data
- Record data