SPRING GROVE AREA SCHOOL DISTRICT

PLANNED COURSE OVERVIEW

Course Title: Mathematics	**Length of Course:** 30 Cycles
Grade Level(s): 2	**Periods Per Cycle:** 6
Units of Credit: N/A	**Length of Period:** 60 Minutes
Classification: Required	**Total Instructional Time:** 180 Hours

Course Description

This course is designed to present developmentally appropriate basic number facts and computation skills. It covers a variety of fundamental mathematical skills that include: Numbers and Operations, Algebraic Concepts, Geometry, Measurement, Data and Probability.

Instructional Strategies, Learning Practices, Activities, and Experiences

- Anchor Charts
- Anticipatory Sets
- Assessments (Chapter, Unit, Teacher-Created)
- Bell Ringers
- Calculators
- Class Discussions
- Closure
- Critical Thinking
- Fact Fluency
- Flexible Groups
- Graphic Organizers
- Guided Practice
- Higher-Level Questioning
- Homework
- Interaction Sequence
- Journals
- Manipulatives
- Posted Objectives
- Practice Exercises
- Presentations
- Projects
- Small Group Interventions
- Teacher Demonstrations
- Teacher Observations
- Technology Integration
- Internet Resources
- Vocabulary (Cards, Strategies, and Lists)
- Wait Time
- Wait Time Extended

Assessments

- Assessments (Chapter, Unit, Teacher-Created)
- Closure
- Fact Fluency
- Higher-Level Questioning
- Presentations
- CASE Assessments
- Projects
- Teacher Observations

Materials/Resources

- Anchor Charts
- Calculators
- Graphic Organizers
- Houghton Mifflin 2007
- Internet Resources
- Journals
- Manipulatives
- Math in Practice
- Resource Books
- Trade Books, Picture Books, Big Books
- Vocabulary (Cards, Strategies, and Lists)

Adopted: 1/27/88
Revised: 9/3/91; 9/16/98; 9/17/03; 8/17/09; 5/20/13; 5/20/2019

Beginning of the Year: Basic Addition and Subtraction	
The Standards of Mathematical Practices	
Make sense of problems and persevere in solving them. **Construct viable arguments and critique the reasoning of others.** **Use appropriate tools strategically.** **Look for and make use of structure.**	**Reason abstractly and quantitatively.** **Model with mathematics.** **Attend to precision.** **Look for and express regularity in repeated reasoning.**
CONTENT/KEY CONCEPTS	**OBJECTIVES/STANDARDS**
2.2 Algebraic Concepts – Operations and Algebraic Thinking • Basic addition strategies • Basic subtraction strategies • Problem solve with basic facts through 20	**2.2.2.A.2** - Use mental math strategies to add and subtract within 20. **Habits of Mind of a Production Mathematical Thinker:** • Reasoning and Explaining • Modeling and Using Tools • Seeing Structure and Generalizing

Unit 1: Numbers and Operations – Base Ten	
CONTENT/KEY CONCEPTS	**OBJECTIVES/STANDARDS**
2.1 Numbers and Operations in Base Ten • Understand, read, and write place value to 1,000 • Decompose numbers in different ways based on place value • Mentally add and subtract 10 and 100 to and from three-digit numbers (if you add a 10 to 326, the only digit that will change is the digit in the tens place) • Compare, order, and count three-digit numbers • Even and odd numbers • Skip counting (do not instruct on multiplication equations • Problem solve	**2.1.2.B.1** - Use place value concepts to represent amounts of tens and ones and to compare three-digit numbers. **2.1.2.B.2** - Use place value concepts to read, write, and skip count to 1,000. **2.2.2.A.3** - Work with equal groups of objects to gain foundations for multiplication. **Habits of Mind of a Production Mathematical Thinker:** • Reasoning and Explaining • Modeling and Using Tools • Seeing Structure and Generalizing

Unit 2: Operations and Algebraic Thinking	
CONTENT/KEY CONCEPTS	**OBJECTIVES/STANDARDS**
<u>2.2 Algebraic Concepts – Operations and Algebraic Thinking</u> • Add two-digit numbers without regrouping • Add two-digit numbers with regrouping • Add three-digit numbers with regrouping • Subtract two-digit number without regrouping • Subtract two-digit numbers with regrouping • Subtract three-digit numbers with regrouping • Problem solve with two- and three-digit numbers - Includes: Multi-step problem Solve with numbers within 100 • **(Beginning Skill)** Multiplication strategies: *Repeated addition - Share equally – Array - Draw a picture* • **(Beginning Skill)** Problem solve with multiplication	**2.1.2.B.3** - Use pace value understanding and properties of operations to add and subtract within 1,000. **2.2.2.A.1** - Represent and solve problems involving addition and subtraction within 100. **Habits of Mind of a Production Mathematical Thinker:** • Reasoning and Explaining • Modeling and Using Tools • Seeing Structure and Generalizing **2.2.2.A.3** - Work with equal groups of objects to gain foundations for multiplication. **M03.B-0.2.1** - Understand and apply the commutative property of multiplication.

Unit 3: Geometry and Fractions	
CONTENT/KEY CONCEPTS	**OBJECTIVES/STANDARDS**
2.3 Geometry • Identify and describe attributes of 2D shapes • Identify and describe attributes of quadrilaterals • Identify and describe attributes of 3D shapes • Problem solve 2D and 3D shapes	**2.3.2.A.1** - Analyze and draw two- and three-dimensional shapes having specified attributes. **Habits of Mind of a Production Mathematical Thinker:** • Reasoning and Explaining • Modeling and Using Tools • Seeing Structure and Generalizing
• Identify and describe how fractions represent a part of a whole • Partition shapes into two, three, and four equal shares • Compare fractions with models • Identify a fraction of a set • Problem solve with fractions	**2.3.2.A.2** - Use the understanding of fractions to partition shapes into halves, quarters, and thirds. **Habits of Mind of a Production Mathematical Thinker:** • Reasoning and Explaining • Modeling and Using Tools • Seeing Structure and Generalizing

Unit 4: Measurement and Data	
CONTENT/KEY CONCEPTS	**OBJECTIVES/STANDARDS**
2.4 Measurement and Data • Identify, count, compare, make sets, and make change using coins	**2.4.2.A.3** - Solve problems and make change using coins and paper currency with appropriate symbols.
• Problem Solve: Add and subtract to solve one- and two-step word problems using money	**Habits of Mind of a Production Mathematical Thinker:** • Reasoning and Explaining • Modeling and Using Tools • Seeing Structure and Generalizing
• Tell and write time using analog and digital clocks to the nearest hour, half hour, and five minutes	**2.4.2.A.2** - Tell and write time to the nearest minute using both analog and digital clocks. *Find elapsed time to the half hour.
• Problem solve: Elapsed time	**Habits of Mind of a Production Mathematical Thinker:** • Reasoning and Explaining • Modeling and Using Tools • Seeing Structure and Generalizing
• **(Beginning Skill)** Perimeter: Measure and estimate lengths in standard units using appropriate tools	**2.4.2.A.1** - Measure and estimate lengths in standard units using appropriate tools. **2.4.2.A.6** - Extend the concepts of addition and subtraction to problems involving length (Perimeter) (B-beginning skill).
• Problem solve: Comparing lengths	**Habits of Mind of a Production Mathematical Thinker:** • Reasoning and Explaining • Modeling and Using Tools • Seeing Structure and Generalizing

Unit 4: Measurement and Data- continued	
CONTENT/KEY CONCEPTS	**OBJECTIVES/STANDARDS**
2.4 Measurement and Data • Represent and interpret data using line plots, pictographs, tally charts, bar graphs, and tables • Problem solve: Use graphs to solve word problems • Capacity	**2.4.2.A.**4 - Represent and interpret data using line plots, pictographs, tally charts, bar graphs, and tables. **Habits of Mind of a Production Mathematical Thinker:** • Reasoning and Explaining • Modeling and Using Tools • Seeing Structure and Generalizing **Not Eligible Content, we will introduce, but not test for mastery*