

PETERS TOWNSHIP SCHOOL DISTRICT
CORE BODY OF KNOWLEDGE (CBK)

Mathematics

First Grade

For each of the sections that follow, students may be required to understand, apply, analyze, evaluate or create the particular concepts being taught.

COURSE DESCRIPTION

- First grade mathematics instruction will promote three major themes: focus, coherence, and rigor in mathematics instruction. This program will cultivate both the deep conceptual understanding and the procedural fluency called for within first grade mathematics.

STUDY SKILLS

- Make sense of problems and persevere in solving them.
- Reason abstractly and quantitatively.
- Construct viable arguments and critique the reasoning of others.
- Model with mathematics.
- Use appropriate tools strategically.
- Attend to precision.
- Look for and make sure of structure.
- Look for and express regularity in repeated reasoning.

MAJOR UNIT THEMES:

- 1. Understanding Addition**
 - **Meanings of Addition**
 - **Join: Combine Two Groups**
 - **Join: Add on to a Group**
 - **Part-Part-Whole**
 - **Compare through Addition**

- 2. Understanding Subtraction**
 - **Missing Parts**
 - **Taking Away from a whole**
 - **Comparing Quantities**

- 3. Five and Ten Relationship**
 - **Base Ten**

- **Parts of Ten**
 - **Part-Part-Whole Relationships**
4. **Addition and Subtraction Facts to 12**
 - **One and Two More**
 - **Doubles and Near Doubles**
 5. **Addition Facts to 20**
 - **Doubles**
 - **Doubles Plus 1 and Doubles Plus 2**
 - **Making 10**
 - **Adding Three Numbers**
 6. **Subtraction Facts to 20**
 - **Relating Addition and Subtraction**
 - **Fact Families**
 7. **Counting and Number Patterns to 120**
 - **Numeration vs. Place Value**
 - **Counting with Groups of 10**
 - **Finding and Using Patterns on a Number Chart**
 - **Counting by 10s**
 8. **Tens and Ones**
 - **Place Value and Base Ten**
 - **Reading and Writing Numbers**
 9. **Comparing Numbers to 100**
 - **Using “one more” and “one less”**
 - **Using Hundreds Chart**
 - **Comparing Numbers**
 10. **Adding with Tens and Ones**
 - **Traditional Addition Algorithms**
 - **Computational Strategies**
 11. **Subtracting with Tens and Ones**
 - **Traditional Subtraction Algorithms**
 - **Computational Strategies**
 12. **Length**
 - **Measuring length as an identifiable attribute**
 13. **Time**
 - **Measuring time as an identifiable attribute**

- **Analog vs. Digital Clocks**
 - **Estimating units of time**
- 14. Using Data to Answer Questions**
- **Creating and Interpreting graphs using data**
 - **Picture Graphs vs. Bar Graphs**
- 15. Geometry**
- **Plane Shapes and Solid Figures**
 - **Sorting and Classifying Shapes**
 - **Composing and Decomposing Shapes**
- 16. Fractions of Shapes**
- **Parts and Whole**
 - **Equal Parts**
 - **Part of a Whole**

MATERIALS (and Supplemental materials used in course):

- Pearson enVisionMath Topics 1-16
- Pearson enVisionMath Centers Activity Booklets
- Pearson enVisionMath Teacher Resource Booklet
- <http://www.pearsonrealize.com>
- Student Manipulatives: snap cubes, 2-sided counters, number cards, dice

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